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THE IMPORTANCE OF PSYCHIATRY IN THE PRACTICE OF MEDICINE*

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THE importance of psychiatry to the medical profession may be measured with a fair degree of accuracy by the prominence of the part played by mental diseases as a factor in public health problems. It is difficult to estimate the actual incidence of mental diseases outside of our hospitals. As a matter of fact, we have no accurate data showing the prevalence of very many diseases of any kind in the community. For purposes of comparison we have available the records of contagious and communicable diseases, and such information as may be obtained from mortality statistics. The United States Census Bureau's report on mortality statistics for 1921, the last one available, showed a general death rate of 11.64 per thousand of the population. The more important causes of death, as shown for that year, were as follows:

Per 100,000 population

Typhoid fever	9.0
Whooping cough	9.1
Diphtheria	17.7
Influenza and pneumonia	99.8
Tuberculosis (all forms)	99.4
Cancer and other malignant tumors	86.0
Heart diseases	147.0
Nephritis and Bright's disease	85.4
Violence, suicide excepted	76.2
Suicide	12.6

The death rate for nervous and mental diseases for a period of four years (1916, 1917, 1918 and 1919) averaged 126.44 per 100,000. Those which may reasonably be assumed to have been associated with psychoses were responsible for a death rate of 19.36 per 100,000 during this same period of time, although this rate from 1906 to 1910 was as high as 32.1. This did not take into consideration the rates for senility (15.5) or suicide (12.8), which might, very logically, have been included for obvious reasons. As far as can be determined, the number of deaths from mental diseases, as shown in the primary causes, represented approximately 50 per cent. of all cases which were associated

with psychoses. Only about 10 per cent. of the cases dying in hospitals for mental diseases showed psychoses as primary causes in the death certificates.

The reports of the United States Public Health Service relating to the incidence of communicable diseases are of interest. The last reports available show a case rate in 1921 for diphtheria of 202 per 100,000 in 45 states. The case rate for measles in 45 states was 277. Scarlet fever showed a rate of 186 in 45 states. The smallpox rate was 100 and represented 43 states. The typhoid fever rate for 44 states was only 46. The case rate for tuberculosis, all forms, was 202.2 in 23 states. It amounted to 367 in Colorado, 279 in the District of Columbia, and 221 in California. These were the highest rates reported for that year.

We can perhaps obtain as reliable information regarding these matters from our own State as are available elsewhere. The case rate per 100,000 of the population for communicable diseases in Massachusetts for 1922 was as follows:

Influenza	189.4
Measles	591.7
Pneumonia, lobar	132.0
Pulmonary tuberculosis	141.3
Tuberculosis, other forms	20.8
Diphtheria	224.2
Gonorrhea	126.3
Whooping cough	173.3
Scarlet fever	199.9
Chicken pox	131.5
Mumps	110.7

The death rate per 100,000 in Massachusetts in 1922 was as follows:

Influenza	14.5
Pneumonia, including bronchopneumonia	139.6
Organic heart disease and endocarditis	200.2
Apoplexy	116.7
Cancer and other malignant tumors	118.1
Bright's disease and nephritis	80.9
Diarrhea and enteritis	33.7
Violence	93.3
Automobile accidents and injuries	12.7
Suicides	11.6

By way of comparison we may now contrast these with the admission rate in our hospitals for mental diseases in Massachusetts, which amounted in 1922 to 106.27 per 100,000 of the population. The total institution population at the end of the year 1922 represented a rate of 403.61 per 100,000. It is worthy of note that, with the exception of tuberculosis and syphilis, the communicable diseases referred to above

*Read before the Norfolk District Medical Society, Oct. 30, 1923.

probably included practically the entire number of cases in the State during the year. Comparative studies should not, therefore, perhaps, be based on the number of cases in the hospitals at any given date, but on the total number under treatment during the year. If we take this fact into consideration, the incidence of mental diseases in Massachusetts during 1922 would reach the startling total of 560.09 per 100,000 of the population.

It is interesting to note that a recent publication issued by the Metropolitan Life Insurance Company, covering a period of six years and representing a study of over 600,000 cases, shows a death rate of 11.81 per thousand. A very important statement in their report is that the death rate for syphilis, locomotor ataxia, and general paralysis of the insane, combined, was 14.3 per 100,000. Their statistics show a total rate of 104.5 per 100,000 due to all diseases of the nervous system.

It may be surprising to some of you to know that the State of Massachusetts is today operating 15 institutions which have to do exclusively with the care and treatment of mental diseases or mental deficiency. The number of patients in these hospitals at the present time is approximately 20,000. The maintenance of these institutions costs in the neighborhood of \$6,500,000 per year, and the problem is one which is increasing in magnitude annually.

Perhaps nothing in recent years has served to call attention to the importance of the question of mental disease and defect to the community in such a striking way as did the late war. It is pretty generally known now that the frequency of these conditions at the time of mobilization and during the subsequent period of military service led to unexpected difficulties. The reports from the Surgeon-General's office show that at the time of the second examination of the first million recruits drafted, 12 per cent. were rejected on account of nervous or mental disease. The number disqualified for service finally reached the surprising total of over 67,000. Twenty-seven per cent. of the beneficiaries of the War Risk Insurance in the latter part of 1920 represented various neuropsychiatric disabilities. Nor do all of these facts, as you well know, indicate the magnitude of the mental disease problem in the community. The number of individuals who are suffering from psychoses of some kind or from actual mental defects, but who have not been committed to an institution, and whose condition is such as to warrant their being at large, is astonishing.

The question may now be fairly raised as to how this concerns the general practitioner. In the first place, it may be assumed that practically every one of the 20,000 patients in our state hospitals were seen at home by their family physician and often came to his attention

first. All of these cases, with very few exceptions, were certified to by two medical examiners before being committed. A great majority of them were sent to hospitals on the advice of their own doctor. Questions as to the criminal responsibility of the insane and the competence of the individual to manage his own person and property are arising more and more frequently, and every physician should be prepared to express an intelligent opinion on these subjects. We hope to present several of these cases for your consideration this afternoon. It is hardly necessary at this time to call attention to the fact that the efficiency of the pupil in complying with the strenuous requirements of our modern school system is dependent very largely upon his mental development and equipment. The disposition of the retarded or slightly defective child is now a well-recognized educational problem. Every physician must be informed on these subjects if he is to play his part in the community. It is surprising to note in the mortality reports of the various insurance companies how many policies have been issued to individuals who must have been suffering from general paralysis or some other form of neurosyphilis at the time of their physical examination. Many persons have been insured who must have presented well-marked physical signs of incurable forms of cerebral syphilis which should not have been overlooked.

You are all aware of the extensive use made of psychological tests during the period of mobilization preceding the late war. The application of this form of mental examination to the various fields of industry is receiving very serious consideration at the present time and has already been used extensively. The fact that a large number of individuals present themselves at the office of the medical practitioner as a result of conditions which in their inception are purely psychiatric in origin is beyond question, and warrants much more thought than has been given to it. Our sanitariums and the clinics of our general hospitals are devoting a great deal of time to the treatment of psychoneuroses and other conditions which cannot either be recognized or properly cared for without some knowledge of psychiatry.

In these days, when the lay press is devoting so much attention to the doctrines of Coué and innumerable other fads more or less similar which are being heard of so frequently, it behooves the practitioner to familiarize himself with mental as well as physical mechanisms. Our hospital experience shows us that it is a very common thing for incipient cases of dementia praecox and other psychoses to be treated for all kinds of physical conditions which have nothing to do with their trouble at all. As a matter of fact, every man who has an extensive medical practice today comes into contact at some time or another with most all of the con-

ditions with which we are concerned in the hospitals for mental diseases. From any number of sources we hear constantly, and very properly so, about various methods for the prevention of disease. In no other field of medicine is this such an important matter as in the early recognition of mental disorders. The work done by the psychopathic hospitals shows conclusively that a large number of individuals, if given early care and attention, can escape the stigma which is generally thought to attach itself to a commitment. Of the 14,922 cases admitted to the Psychopathic Hospital in Boston during a period of eight years, 38.45 per cent. were subsequently committed as insane and 25.44 per cent. were returned to the community as not requiring further hospital treatment. That psychiatric clinics meet with a response on the part of the public is shown by the fact that the attendance at the Out-Patient Department of the Boston Psychopathic Hospital averaged over 1300 annually during a period of seven years, and is constantly increasing. The response in other cities where similar activities have been undertaken has been surprising. This is due, to a certain extent, to the fact that the family physician often feels that he is not qualified to advise his patients on matters of this kind. An analysis of our cases shows that practically all of them come into the hands of the general practitioner at some time or another. We now have mental hygiene societies in nearly every State, as well as a national and an international organization. Dr. Copp called attention some time since to the fact that the dominant figure in mental hygiene activities must eventually be the family physician, who has an opportunity to see the beginnings of mental disorder when they first manifest themselves.

The traumatic psychoses and neuroses develop inevitably in individuals who have been cared for and treated during a considerable period of time by a practicing physician. Many of these cases ultimately receive serious consideration in the courts as the result of suits for damages. The senile psychoses are very frequently encountered, and the question of mental competency often comes up. A study of these conditions has demonstrated the existence of a considerable group, now classified as "pre-senile" forms, which are not so readily recognizable. These are cases which are quite likely to be seen first by the family physician. About 10 per cent. of the admissions to our hospitals consist of senile psychoses. In connection with these, the arteriosclerotic disorders should be mentioned. These make up about 5 per cent. of our admissions.

The importance of the syphilitic diseases of the nervous system will, I think, be recognized by everyone. A study of over 70,000 first admissions to 48 hospitals in 16 different States

shows that a trifle over 11 per cent. of the first admissions were cases of general paralysis—not to mention those diagnosed as cerebral syphilis. It is generally believed that at least 5 per cent. of all syphilitics develop general paralysis sooner or later. It has been shown by various observers that an astonishing number of cases suffering from secondary and tertiary syphilis show an increased cell count in the cerebrospinal fluid, and other evidences of a beginning involvement of the nervous system. The necessity of a thorough familiarity with such complications is therefore obvious. The early stages of general paralysis often escape recognition and the condition is not diagnosed until it has progressed to such a stage that treatment cannot accomplish much for the patient, and the only question at issue is one of hospital care during the terminal stages of the disease. We hope to show you today what the present status of the specific treatment of neurosyphilis is. We also hope to demonstrate to you the importance of recognizing these conditions early and point out the serious situations which sometimes arise owing to the fact that syphilis of the nervous system is not diagnosed soon enough.

Huntington's chorea, brain tumors, cerebral embolism, paralysis agitans, meningitis of various types, encephalitis lethargica, multiple sclerosis, tabes dorsalis, acute chorea, and various other diseases of the brain and nervous system are quite frequently associated with psychoses, and this fact should be given adequate consideration. The admissions to mental hospitals which could be definitely attributed to alcohol amounted to about 5 per cent. of the total number during the years 1917 and 1918. In New York between 1909 and 1912 the alcoholic cases constituted 10 per cent. of the first admissions. This dropped in 1920 to less than 2 per cent. The admissions to several of our hospitals during 1922 and 1923 have shown a considerable increase. We are now dealing, however, with alcoholic psychoses, which are entirely different from the types formerly described in text-books. This is due to the use of wood alcohol, "moonshine," and various other toxic substances which are so prevalent today. We occasionally encounter delirium tremens and the hallucinosis so common in former times, but have to do almost entirely with pathological intoxications. The Korsakow syndrome, which was becoming a very important one, and strongly resembled general paralysis in many ways, has practically disappeared. What the alcoholic psychoses of the future will be is something that cannot be anticipated at this time.

Much has been said as to the forms of insanity resulting from the use of drugs, which has become so common during the last few years. The investigation made in 1919, by a committee appointed by the Secretary of the United States

Treasury, showed that the number of drug users in the United States was approximately 1,000,000. It is said that the amount of money expended by them is in the neighborhood of \$61,000,000 annually. In view of this fact, it is interesting to note that the admissions to the mental hospitals as a result of drug psychoses constituted less than one-half of 1 per cent. of the total.

Pellagra is a disease which in this part of the country is very rarely encountered by the general practitioner. The fact that it is almost invariably associated with mental disturbances is, however, worthy of note.

A more important field is the psychoses which occur in the course of somatic diseases. These are classified by the American Psychiatric Association as including delirium with various infectious diseases, the post-infectious psychoses, exhaustion delirium, the delirium of cardiorenal disease, and the mental conditions arising from the diseases of the ductless glands. The last-mentioned group has given origin within the last few years to an entirely new specialty in medicine,—endocrinology. This promises to become a matter of very great importance and merits the careful consideration of every practicing physician.

The manic-depressive psychoses constitute about 15 per cent. of the first admissions to our mental hospitals. These are generally looked upon as being due to constitutional causes. The depressed forms particularly are quite likely to come to the attention of the general practitioner. A study of the individuals developing manic-depressive attacks shows that these conditions usually appear in persons having peculiarities of temperament, manifested for years before there is any question of insanity. Thus, we speak of the manic make-up,—persons who by disposition are unusually active, sociable, pushing, talkative, cheerful, optimistic; in some instances, domineering or irritable, and as a rule showing lack of application and concentration, with varying moods. The depressive make-up is described as being gloomy, worrisome, subject to inhibitions and restraints, with difficulties relating to deciding questions and problems which must be met. These are the moody individuals who are easily discouraged. Others show a cyclothymic make-up and are emotionally unstable, blue spells alternating with periods of over-activity.

Dementia praecox constitutes approximately 24 per cent. of the total number of admissions to American hospitals for mental diseases. This disease develops usually in individuals of a so-called shut-in type. These are the persons who by nature are shy, retiring, self-conscious, secretive, seclusive, and unsociable. They often show a lack of interest in the opposite sex, and are inclined to day-dreaming, odd habits and hobbies of various kinds. An incipient case of

dementia praecox frequently exhibits somatic symptoms which bring him into the office of the general practitioner, and the early recognition of these conditions is a matter of considerable importance to the patient as well as his family. We find that many of our cases of dementia praecox develop during the adolescent period, in youths who have not been able to adjust themselves to modern educational requirements. Nowhere else is there greater need of medical advice than in the case of children during the adolescent period, who are unable to keep up their work in preparatory schools and academies. Social problems are constantly arising in our consideration of individuals suffering from a beginning dementia praecox. Someone must advise the families of these patients as to their general medical care and what their capacities and limitations are in the way of employment. It is very obvious that individuals of this type, who cannot adequately meet the stress and strain of modern industrial conditions, should be supervised with a great deal of care, and some judgment used in determining what vocations, if any, they are fitted for.

We have to do with many cases of a definitely paranoid type which do not show any marked degree of deterioration, but sometimes become a serious menace to the welfare of the community. These are the cases which often come into consideration by courts, and the question of responsibility for criminal acts is nearly always raised when they are accused of having committed serious crimes. The appearance of psychoses during the involutional period of life is now well known to the profession. This is a matter of great importance, in view of the fact that in none of the psychoses which come to our attention is there such danger of suicidal attempts. The majority of these cases require careful supervision, and a protracted hospital residence. The necessity of their early recognition is, therefore, obvious.

The frequent appearance of psychotic manifestations of one kind or another in epileptics is so well known as to merit comparatively little consideration at this time. The occurrence of the so-called clouded or dream states is so common in these individuals that they should be understood by the practitioner.

The neuroses and psychoneuroses have been given a great deal of space during recent years in our text-books and medical journals. Many cases of neurasthenia, hysteria, and psychasthenia require hospital care. The important thing, however, is to give these conditions early recognition, accomplishing everything that can be done for them before the necessity of a hospital commitment arises. It is impossible to avoid any reference at this time to the well-known views of Freud relating to the varied complexes which underlie hysterical manifestations and the almost countless contributions in

our recent literature on the subject of psychoanalysis. This is too extensive a subject to go into at this time. It cannot be denied that Freud has contributed a great deal to our knowledge of these conditions, and that a complete psychoanalysis offers the key to the proper method of approach in many instances. It is equally true, I think, that the importance of psychoanalysis has been unduly emphasized by some of our enthusiasts. This should not interfere with the proper consideration of such an important subject.

I feel that the general practitioner has a much closer contact with the so-called psychopathic personalities than has the psychiatrist. These individuals are frequently subject to episodes of irritability, excitement, depression, confusion, and even paranoid states. The genuine prison psychoses belong in this group. Many of the psychopaths, however, never become definitely psychotic, and their recognition is very important to the practitioner, who is likely to encounter them at any time. A great majority of the psychopathic personalities do not come into our institutions, but do create a great deal of trouble in the community. No one has given a better description of these ill-balanced individuals than that of Régis: "After maturity they are complex beings, heterogeneous, made up of disproportioned elements, contradictory qualities and defects, and as over-endowed in some directions as they are deficient in others. Intellectually, they often possess, in a very high degree, the faculties of imagination, of invention, and of expression; that is to say, the gifts of speech, the arts, and poetry; on the moral side, they possess a singular emotivity, or rather, sensibility. What they lack, more or less completely, is good judgment, the moral sense, and especially continuity or logical consecutiveness, a unity of direction in intellectual production and the actions of life. It follows, that in spite of their often superior qualities, these persons are incapable of conducting themselves in a rational manner, of following regularly the exercise of a profession that seems well beneath their capacity, of looking after their interests or those of their families, of carrying on business prosperously or of directing the education of their children; their existence, therefore, constantly recommencing, is one long contradiction between the apparent wealth of means and poverty of results. They are the utopians, the theorists, the dreamers, who are enamored with the best things but accomplish nothing. The public, which sees only the brilliant exterior, looks upon these individuals as artists and superior beings. The medal is reversed, however, to those who are compelled to associate with them and share their existence; they see their defects, their incapacities and evil tendencies, of which they are not merely the witnesses, but also the victims. Aside from their lack of mental poise, these in-

dividuals also display an excessive emotional sensibility and an enfeeblement of psychic energy that reveals itself by a noticeable predominance of spontaneity over reflection and volition. Hence their inability, their instability, and their irresolution; hence also their alternations of apathy and activity, of excitement and torpor, their violent attacks of passion and their cries of despair for the most trivial and slightest reasons."

Psychiatry has of late years been recognized as constituting a subject of such importance that it merits more consideration from the general practitioner than it has heretofore received. As a rule, it is an essential part of the curriculum in the highest type of our medical schools. Some knowledge of this branch of medicine is required now by the majority of our state boards of medical examiners. The necessity of modern medical care in our mental hospitals is becoming more and more apparent. A more general recognition and understanding of psychiatric medicine on the part of the practitioner is equally important.

The object of this meeting has been to impress you with the fact that the psychiatry of today covers a field which extends far beyond the walls of an institution, is of vital importance as a public health problem, and a subject of more than passing interest to every member of the medical profession.

THE ORGANIZATION AND DEVELOPMENT OF MENTAL CLINICS FOR COMMUNITY CARE*

BY D. A. THOM, M.D., BOSTON

THE New England Society of Psychiatry would probably find but little divergence of opinion regarding, not only the desirability, but the necessity of organizing and developing mental clinics at such places and at such times as to serve best the community and most of you would further agree that such a service should only be limited by the available funds and personnel which the State might be able to secure. It is not necessary to inform you regarding the lack of provisions for the community care of mental cases, or to mention the fact that, in the national program of preventive medicine, we, as psychiatrists, are still lagging behind.

I am robbed by your intelligence on the subject under discussion, of the opportunity of lulling you to sleep by pouring statistical data into your ears about the inadequate number of beds, the inadequate staff, and the inadequate funds which we have at our disposal to care for this apparently ever-increasing army of in-

*Read before the New England Society of Psychiatry, Concord, N. H., Oct. 3, 1923.

adequate people. The time has come to present a program for community care of such cases suffering from mental disorders that do not need custodial supervision. We ought to appreciate from a medical point of view that the diagnosis no longer serves as a criterion of who does and who does not need institutional care. A case of general paresis or dementia praecox may make a very satisfactory adjustment, both social and economic. On the other hand, many of the individuals belonging to the psycho-neurotic group are grave social dangers without strict supervision. "Committable" and "not committable" are terms of little medical significance just as the phrases "not insane" and "not feeble-minded" have no social significance. Conduct, so far as it determines the individual's ability to live among his neighbors in peace and meet the obligations he has assumed to his family and the community, may be taken as a fair standard of an individual's right to follow his own pursuits.

Notwithstanding the fact that the mental hygienists, under the leadership of such men as Drs. Salmon and Williams, have done a perfectly splendid piece of educational work, the preventive side of mental medicine is still in the process of being sold to the public. I feel that, unfortunately, we have reckoned too much with paper profits and communities have bought mental hygiene who thought that the initial cost was the last and that it was self-supporting, regarding both funds and effort. Others have purchased it as they might buy at a bargain basement sale—simply because somebody else was buying and still others have purchased who have not paid. This type of buying has naturally not tended to stabilize the mental hygiene movement except in a few isolated localities. But what has been even more harmful to the cause is that much of the mental hygiene propaganda that has been sold has not been delivered, simply because we, as practical psychiatrists, did not have the goods: first, because the public has been given reason to expect more than our present knowledge of mental disease can give; and second, we have fallen short in our efforts to give them the best of what we have.

I am able to mention only the more obvious reasons why community care of mental cases, quite suitable for this type of treatment, has not advanced and developed along with the programs in institutional care of mental cases during the past fifty years or with the advances made in other aspects of preventive medicine.

1. Mental clinics, to the man of the street, have been associated with patients on visits from State hospitals.

2. All too frequently, these clinics have been held in grand jury rooms, council chambers, school committee rooms, and other public meet-

ing places in no way associated with medicine or medical programs.

3. The infrequency and often the irregularity of the clinics have lessened their value.

4. The clinics have invariably been of secondary importance to the demands of the institution. Consequently, if it is necessary to make any curtailments, it is the clinic that is neglected.

5. Lack of reports or inadequate reports to the social agency sending in the case has been a frequent criticism.

6. The attitude of the medical profession toward the development of any project which flavors of State medicine.

If clinics for mental disorders are to succeed in the purpose for which they are organized these glaring defects must receive attention. In order to serve their purpose and to do away with the idea, so firmly fixed in the public mind, that mental clinics are for insane people, I would suggest that the clinics be classified as follows: (a) clinics for children of the pre-school age; (b) clinics for children of the school age; (c) clinics for nervous and mental disorders; (d) clinics for the ex-hospital patient.

Every mental clinic, so far as it is practicable, should be associated with the general hospital of the community in which it is operating. The general hospital will soon find the services of a psychiatrist indispensable in dealing with both in-patients and out-patients and the mental clinic will be in a position to broaden its scope if specialists in other lines are available for consultation. It also presents an opportunity of getting over a most important piece of educational work where it is possible to demonstrate the practical application of psychiatric technique to general medical and surgical problems.

It is absolutely essential that any clinic where therapy is one of its main objectives must be operating at least once a week.

In the organization of mental clinics I think it is extremely important to appreciate that the problem of mental disorders can best be approached in its relation to other social problems which are better recognized by the public mind, such as delinquency, dependency, industrial inefficiency, etc., and that a close contact with social agencies will be most advantageous. It must be borne in mind that the primary interest of such an agency is not in the diagnosis but in a plan of treatment to be followed in each individual case and reports from the clinic must outline in detail the course to be pursued. If there are several courses which might be considered, each should be presented with its advantages and disadvantages, and the chances of success or failure attached to each. Such a report will be of real value to the parent, physician, or agency referring the case.

The clinics for the child of pre-school age are of the greatest importance in any plan for

the community care of mental disorders. Temper tantrums, pugnacity, shyness, destructiveness, personality changes, delinquency, and the problems concerning feeding, elimination, and sex must be considered in relation to the intellectual equipment of the individual and the mental atmosphere of the home in which he is being reared. There is no doubt but what there is a very definite relation existing between the formation of desirable habits in children and the development of an adequate personality in later life. We are not prepared to say that the organization of such a clinic will affect in any way the mental breakdowns of adult life. As a matter of fact, it is not necessary to justify the clinics on any such speculative grounds. The results obtained and the benefits derived for the child and the parents are such that they stand out as practical demonstrations of mental hygiene that should be encouraged and developed. Such clinics need a rather specialized personnel and the cases a very intensive study. For some time such clinics will probably be confined to the large cities where a sufficient number of cases can be seen at each clinic so that the cost will not be prohibitive.

The school clinics as operating in Massachusetts, with which most of you are familiar, have been organized and developed in a most efficient way by Dr. Fernald. They are obviously meeting a need in the educational system that has been felt for many years. Such clinics are necessarily diagnostic in function. The work is so extensive and the personnel so limited that there is but little opportunity to deal with the problem cases from a therapeutic standpoint.

It is here that the clinics for the early cases of mental and nervous disorders which have been started in connection with the general hospitals wherever practicable will be in a position to supplement, to a certain degree at least, the work that is being done in the schools. When the Legislature passed the law by which all school children three or more years retarded should have a mental examination and requiring cities and towns having ten or more mentally defective children to establish special classes, the first and most important step in the treatment of incipient mental diseases was accomplished. The fact that children between the ages of six and fourteen come under the jurisdiction of the school authorities will eventually not only permit the registration of a large per cent. of the feeble-minded of the State, but will open up new avenues for these mentally handicapped individuals by virtue of special training and proper education to develop to the highest degree their limited mental capacity and, in many instances, to become social assets rather than liabilities to the community in which they live. The plan evolved and put in operation in Massachusetts for the examination of school children is obviously an essential part of any scheme

of preventive medicine so far as it relates to mental disease. Since it has been demonstrated that this program is not only theoretically wise but practically sound, further comment seems unnecessary.

I have already stated that the clinics for incipient cases of mental and nervous disorders should be associated with general hospitals and that such clinics should be held at least once each week, and that the clientele of the clinic should not consist of the ex-hospital patients, whose evidence of mental aberration or deterioration is frequently all too obvious, but of the less well-defined cases of mental disorder. It is not surprising that the mother of a neurotic young girl should feel somewhat embarrassed about going for treatment to the same clinic that is being attended by her neighbor's son who is considered crazy in the neighborhood where they live. It is perfectly apparent, too, that there are many advantages if the individual can state that he is attending a certain hospital which treats all kinds of illnesses rather than some particular clinic which is reputed to treat mental cases. The time has not yet arrived when the community at large is willing to look upon mental disease in the same light as physical ailment. To be sure, we have advanced considerably during the last decade and our attitude toward mental health is more intellectual and less emotional than it was, but as Dr. Southard pointed out, "The fact that there are degrees of civilization among the States of the Union is a fact that negates the idea of organizing the country for mental hygiene by any of the rubber stamp methods so pleasing to the constructors of programs, pleas, and plans in the beloved committees of the great organization societies."*

A program for the community care of mentally sick in New England would obviously be unsuited for the South and although the plan I am outlining I believe is perfectly feasible and practical for a State like Massachusetts where mental medicine is already organized, in many other States it would be necessary to precede the organization of clinics by much educational work. Dr. Haven Emerson, in discussing "The Place of Mental Hygiene in the Public Health Movement," stated, "It must consider without reservation that, incomplete as our knowledge is of medicine and the true basis of the laws of health, we already have so much at hand that we fail to use that there is no excuse for idleness and that there need be no delay in action."[†]

Although psychiatry fails more in its approach to a science than other branches of medicine, yet, as an art, it requires a skill in performance acquired only by experience, study, and observation. I am firmly convinced that we have

*From "Zones of Community Effort in Mental Hygiene," read before the National Conference of Social Work, 1917.

[†]Read before a meeting held under the auspices of the National Committee and the Massachusetts Society for Mental Hygiene, at Boston, Feb. 8, 1922.

already at hand sufficient knowledge which, if properly utilized, will do much to place psychiatry in a respectable place in the scheme of preventive medicine.

The incipient cases of mental disease—it matters not whether they be hysteria or the acute mental changes following a case of encephalitis lethargica—will test the skill and ingenuity of those best qualified to practice psychiatry. It, therefore, behooves the superintendents of the institutions, under whose supervision the clinics should naturally operate, not only to delegate to the out-patient clinic a well-qualified psychiatrist, but to provide him with well-trained assistants in the way of a psychologist and a social-service worker. I do not hesitate to say that these provisions should be made even at the expense of the institutional cases.

To me there is a glaring absurdity in the operation of out-patient clinics, both in general and mental hospitals. All too frequently the man best qualified by training and experience is devoting his time to the house cases which are invariably well marked and advanced while the cases presenting themselves at the out-patient clinics where the disease is seen early and at its incipient stage, where frequently signs and symptoms are much more vague and intangible, and where conclusions have to be drawn and diagnoses have to be made on hurried examination and insufficient history, are met by the physician of limited experience who ponders away over these most difficult medical problems.

The clinic for the hospital patient on visit has for many years been recognized as a most useful adjunct for the community care of a selected group of mental disorders. There is no doubt that such a clinic, in conjunction with a well-organized social service, has made it possible for many patients to enjoy community care whose stay would otherwise have been prolonged in the institution. The degree of adjustment these individuals are able to make, of course, depends very largely upon the complexity of the environment to which they return.

It is of the greatest importance to the future welfare of the individual who has already had a mental breakdown that his personal contacts be with those who have an intelligent idea of the patient's limitations, that they understand clearly his deficiencies, and peculiarities, and that they manifest an interest in the individual that will assure coöperation with those directing the community care of the patient's life. A great deal can be accomplished through this coöperation to help the patient avoid the shoals upon which so many unstable individuals are wrecked.

No better demonstration of what can be done by intelligent community care is needed than that of the Danvers State Hospital. Seventy-six per cent. of the cases that were discharged from that institution have succeeded in making

satisfactory, economic and social adjustments.

I do not believe that it is particularly important that these after-care clinics be attached to general hospitals or that they be held more frequently than once a month. The success of this type of clinic is largely dependent upon the social service department and the interest and coöperation it is able to stimulate in the community in behalf of the patient.

In closing, I can only repeat what I said on another occasion about this same subject, "I know of no way in which the State can do more to care for the mental health of its citizens than by well organized out-patient clinics. Not only do they provide for the treatment of the maximum number of patients at the minimum cost, but they bring the patient in contact with the psychiatrist and his organization during the early and incipient stages of disease. Assistance is available at a time when treatment is most hopeful, and when the patient is still capable of realizing his own needs. Treatment is given in a manner that makes it acceptable and compatible with the patient's social and economic obligations. It permits him to carry on his work during his rehabilitation and to continue to dwell in the community, in the environment in which he must manage to live if he is to play a part in the social scheme of things. He learns to carry his burden, not by laying it down and retiring to an artificial environment, but by developing new methods of meeting difficulties, minimizing waste effort, permitting some one else to help in eliminating irritating environmental factors, and thereby over-coming worry and anxiety that are out of all proportion to the situation. Whatever the solution may be, if it is achieved without hospitalization, much has been accomplished for the individual and for the State."*

*"Results and Future Opportunities in the Field of Clinics, Social Service, and Parole," read before the Mental Hygiene Division of the National Conference of Social Work, Providence, R. I., June 29, 1922.

A COMMUNITY MENTAL HYGIENE CLINIC*

(A Preliminary Report)

BY SAMUEL TARTAKOFF, M.D., TAUNTON, MASS.

ON April 4, 1923, there was opened in the city of New Bedford, Massachusetts, a mental hygiene clinic under the auspices of the Division of Mental Hygiene of the Massachusetts Department of Mental Diseases. New Bedford, a textile center, is a city of approximately one hundred and twenty-five thousand population. Because of its mercantile associations and the usual

*Read before the New England Society of Psychiatry, Concord, N. H., Oct. 3, 1923.

associated economic and social conditions, and because of its size it was felt by both the Massachusetts Society for Mental Hygiene and by the Mental Hygiene Division of the Massachusetts Department that this city would offer fertile soil for a clinic of the type proposed.

PURPOSE OF CLINIC

Its first aim is that of service, primarily to those individual cases presented to it, whether they present themselves of their own volition, or whether referred by agencies or courts; and secondarily, to the community in general. If we are able to convey a small part of the teachings of our experience to the public we can consider that we are carrying on a useful, constructive project. We feel that education is one of the primary functions of the clinic. No set rule as to the method of service to be employed in these cases can be laid down, as there are very nearly as many types of recommendations made as there are cases which present themselves for examination. Each individual, whether child or adult, must be studied in his or her entirety. A complete analysis of the physical and mental condition, together with those factors which tend to modify physical and mental health, must be made. An attempt will be made by means of case records to explain in a following paragraph the necessity for thorough analysis of a condition presented. The problem in children is a large one. The experience of others, masters in their fields, has taught us that physical defects in their early manifestations are much more readily amenable to treatment than at such time as these defects have become more severe or perhaps chronic.

We have all seen the misgoverned child—the misunderstood child—the child whose ideas, ideals, fancies, likes and dislikes have not been given due consideration. We have seen this child presented for examination at mental clinics because of conduct disorders, and because of emotional disturbances, directly dependent upon this lack of understanding and lack of appreciation, and have seen this same child after correctional measures have been instituted, take his or her place in the community, no longer a problem.

In the period of adolescence one meets with certain phases of emotional disturbances and of conduct disorders, comparable to the disturbances in children. Here also a complete examination is necessary. Not in all cases is one able to ferret out the cause of the disorder, but having the finished product, the purpose of the clinic is to attempt to re-assemble in working order the disordered human mechanism. In this group the process of repair in many of the cases is a more difficult one than that presented in children, inasmuch as the actuating cause has been at work over a longer period of time, and

the harm done psychically is more deeply engrafted.

Throughout the adolescent and adult period, the psychoneurotic, the psychotic, and the organic groups must all be dealt with.

THE PERSONNEL

The State Hospital at Taunton is the nearest state institution to New Bedford, and inasmuch as there were trained individuals in that institution, it was felt advisable by the authorities to place the clinic under the direction of that hospital. As a result, one physician, two social workers, and a psychologist were taken from the staff of that institution. As each worker assigned to the clinic was already devoting full time to his or her regular hospital work, it was possible to call upon them for their services on but one afternoon a week.

Each of the above-mentioned members of the clinic staff has a very definite task to accomplish in carrying out the mechanism of the clinic.

(a) The psychologist does psychometric examinations, and in so far as time permits, a psychometric examination is done on each case presented. Special effort is made to determine the special adaptabilities of our cases.

(b) The social workers have been fulfilling two functions. Because of limited personnel they have acted in the capacity of clerks, and being specially trained have taken medical and social histories from a neuro-psychiatric point of view. An attempt is made, when the occasion permits, to send these workers into the field to carry out therapeutic measures.

(c) The psychiatrist does a complete mental examination, and in addition a complete physical examination on each patient presented. He is responsible for the clinic, and makes recommendations after a careful study of the medical, social, psychiatric, and psychological data which have been presented from their various sources.

SOURCE AND NUMBER OF CASES

During the six months of our existence there have been seen one hundred and eleven different cases, and during this same period of time there have been two hundred and twenty-nine visits to clinic. Only those cases are accepted that are felt to be unable to pay for private professional services.

Cases have been presented from the following sources:

1. Community voluntary cases. These are the type who, feeling the need for mental hygiene, have come of their own volition. It is gratifying to report at this time that of those cases seen, twenty have been of this type.

2. Agency cases. Among those agencies which have utilized the clinic may be mentioned the

Family Welfare Society, the Children's Aid Society, the Society for the Prevention of Cruelty to Children, and the International Institute. Fifty-five cases have been referred by agencies.

3. Those cases referred by private physicians. Of these there have been three.

4. One case has been referred from the courts.

5. One case has been presented for examination from the public schools.

6. Those cases previously residents of an insane hospital, who residing in the community, require after-care. Of these, there have been thirty.

TYPES OF PROBLEMS PRESENTED

Those problems presented in certain cases, particularly among children, are somewhat similar one to the other, but in the majority of cases the types submitted differ so widely one from the other, that in an analysis of them one finds nearly as many different problems as there are individual cases. The following list of problems has been taken at random from our records, and gives a fairly clear idea of their variety, and of the interesting possibilities for constructive mental hygiene which they suggest.

1. Diagnosis and prognosis? What treatment is necessary? What else can be done along educational lines? Is a school for the feeble-minded the only place for her?

2. Unmarried mother. Question of mental efficiency.

3. Marital discord.

4. Chronic lying and stealing.

5. Will not live with father. Why not? What can be done?

6. Shock. Cause and prognosis?

7. Conduct disorder.

8. With her mental endowment should she train to become a nurse?

Those individuals who presented the above problems ranged from three to sixty years of age, and in an analysis of their cases there were found both organic and functional disorders.

ILLUSTRATIVE CASES

CASE 1. E. S. is a white girl of ten years and nine months, born in America of English parents.

Problem Presented: Teacher reports her extremely nervous. Lately twitches a good deal. Seems retarded at school.

Family History: Paternal grandmother died at about the age of fifty, after having had a number of shocks. She was always of a nervous and quarrelsome disposition.

Paternal grandfather was excessively alcoholic. At times was religiously insane.

One paternal great-aunt had convulsions in early life.

Paternal uncle is moderately alcoholic and very nervous at times.

Two paternal aunts have had residences in state

hospitals for the insane, each being diagnosed dementia precox.

Patient's father is at present a patient at the Taunton State Hospital, a case of paranoid dementia precox.

Patient's mother is psychoneurotic.

Personal History: Her birth was normal. As a baby she slept poorly and cried a great deal. She was bottle fed. Had a number of convulsions before the age of one year, but has had none since. She had measles at the age of two. Her tonsils were removed at the age of eight.

Educational History: She started school at the age of five and during her five years of school has been twice a repeater. She is particularly poor in arithmetic. She is at present about to enter the fourth grade.

Mental Make-up: Patient was more often unhappy than happy, and felt often that the other children discriminated against her. She is headstrong and hard to discipline. When crossed or corrected gets upset almost to the point of confusion. She is extremely seclusive and self-centered, preferring by far to remain alone in the house reading to going out and playing with other children. Is not interested particularly in any games. She is afraid of the dark and has a fear of suffocating when her head is washed.

Physical Examination: Reveals her to be a pale, anemic girl of average height, who is several pounds under weight. Her heart rate at the time of examination was 120. There was palpable the so-called thrill of mitral stenosis, and upon auscultation that which has been termed the presystolic murmur was heard. The skin of her entire body was hyperesthetic.

Mental examination revealed an extremely shy, fidgety youngster, who lacked that poise which is usually acquired by a girl of ten. Stream of mental activity was extremely slow, and because of her nervous tension there were times when she found herself almost unable to speak. In mood she was anxious and apprehensive, and at times showed almost hopeless confusion. Her memory seemed decidedly poor, as did her calculation, her general grasp of school knowledge, and her judgment. Psychometric examination in April showed her to have a mental age of eight years and eleven months, and in July one of eight years and six months. She showed much scattering and poor reasoning ability.

Own Story: Patient recognizes and has full appreciation of her shyness, her seclusiveness, and her fears. It was learned from her that before her father's admission to state hospital he had threatened her violence.

Causative Factors:

1. Bad heredity.

2. Unfortunate home condition—the father now committed to an insane hospital had been the sole support of the family, and when taken from his home left the family in a miserable financial situation.

3. Medical conditions—patient showed herself to be undernourished and to have an organic heart condition.

4. Personality defects.

Recommendations: The recommendations in this particular case were made as in other cases, with its individual causative factors in view. The hereditary factors did not lend themselves to therapy. Through the aid of her mother's people and of social organizations relief to a certain extent was obtained at the recommendations of the clinic. It was recommended to the mother that she be taken to the Cardiac Clinic and to the Nutrition Clinic in order to correct, in as large a measure as possible, the physical defects. Repeated visits to the clinic for the purpose of having talks with a psychiatrist were suggested. It is to be impressed upon those who come

in contact with the child that she has many limitations, that plus her poor original endowment she has had to face environmental factors which have been detrimental to her progress.

Follow-up Work: From the time of her original visit until the present time interviews have been had with either the patient or her mother on six different occasions. There has been progressive improvement. Patient is less self-centered and less seclusive. Her fears have diminished nearly to the point of their being absent, and her physical condition is much improved, the patient having gained in weight, her appetite having improved, and her periods of lassitude having become less frequent. This case has been followed too short a time for us to state what the outcome eventually is going to be, yet those traits which had been proving themselves to be particularly detrimental to her progress have been eliminated to a great extent.

CASE 2. I wish to present in order to demonstrate to you an entirely different type of case in an adult, forty-nine years of age; married; English by birth; Protestant.

Introductory Statement: The patient was brought to the clinic by his wife and stated that some eight months previously after having finished a day's work he had come home, and without warning had collapsed. This had been the onset of a period lasting three months, during which time the patient was more or less oblivious to all that went on about him, and that following these three months there had been some improvement, but there were still present a marked memory defect and inability to articulate clearly, and an area of anesthesia over the inner surface of the left thumb.

Family History: Patient's mother had three shocks before she died, at the age of fifty-six. She was sick five years before her death; her mouth was twisted and her speech indistinct. The family history suggests nothing more of particular interest.

Personal History. Patient was born in England. His early life was uneventful. Had had during his life but a few minor illnesses. It is recorded that he drank and smoked in moderation. Was known to be a jolly, good-natured man who was extremely good company. Patient was married at the age of twenty-two. There have been no children.

Present Illness: In October of 1922 became sick quite suddenly; talked strangely and held on to his left temple. For a period of three weeks he was in bed, and although he seemed strong, was apparently not so. He was confused and entirely disoriented. At times was childish. Was unable to call friends or familiar objects by name. His memory was extremely poor.

Physical examination showed a rather obese male adult, 5 feet nine inches in height, weighing 159 pounds. His features were ironed out and his face rather expressionless. There was present some paresis of the left facial muscles, a hyperactivity of the deep reflexes, an irregularity of the pupils, each reacting, however, within a limited arc to direct light. There were present two scars, one at the angle of the right jaw and the second on the right shoulder, both of which suggested very strongly specific disease. In the anterior third of nasal septum there was present a circular perforation large enough to admit a medium-sized pencil. At a later examination the condition of the reflexes was found to have altered, being rather difficult to elicit. At this time, as at the time of the initial examination, there was found to be present a marked speech defect, exaggerated upon the performance of test phrases. Blood examination proved to be negative to the Wassermann test. The cause from its history, from its physical findings, and from the psychiatric findings, which will later be enumerated, was apparently one of general paresis.

in spite of the negative blood Wassermann. In order to prove beyond the question of a doubt that the case was one of paresis, it was decided that a lumbar puncture be done, and very much to the surprise of all the clinic workers it, as well as the blood, gave a negative Wassermann reaction, no reduction of colloidal gold, there was no increase of albumin, globulin was absent, and there was no increase in cells.

Mental Examination: Patient proved to be quiet and cooperative. He was rather silly in reaction, almost to the point of childishness. There was an inability to find words to express his thoughts. There was more or less confusion. There were times when his speech defect became so marked as to make his conversation almost unintelligible. His mood was variable, at times showing a childish silliness and at other times depression to the point of tears.

This case is similar to cases seen by you all at various times in your hospital associations, and I do not present it in order to bring to you any new condition, and neither do I add to material already at hand on paresis or cerebral arteriosclerosis. The fact that the spinal fluid proved to be absolutely negative, as well as the blood, led us to eliminate our clinical diagnosis paresis and to adopt the diagnosis of cerebral arteriosclerosis.

Earlier in this paper it was stated that an attempt would be made to explain the necessity for thorough analysis and investigation of conditions presented to the clinic. I have cited the above case with this particular purpose in view. I hope that it will show to you as it did to me and my clinic associates that necessity.

CONCLUSIONS

1. The purpose of the clinic is that of service to the individual case and to the community.
2. The clinic fills a community need.
3. Its presence is justifiable, in that satisfactory results are being obtained in a large percentage of cases.

MILK-BORNE DISEASES AND THEIR PREVENTION*

BY JOSEPH GARLAND, M.D., BOSTON

"No greater field of usefulness exists than the production of milk for human consumption," we may read in a bulletin of the United States Department of Agriculture, if we are given to reading those valuable publications, and few who have made even a cursory study of the subject would fail to agree. There are, however, certain responsibilities connected with this field of usefulness which must not be minimized, and the more important of these I shall attempt to emphasize, for they are important, they concern us all, and as a rule we pay very little attention to them.

*Read at a combined meeting of the Barnstable, Bristol North, Bristol South and Plymouth District Medical Societies, Nov. 8, 1923.

Milk is a simple substance in itself. It is a liquid, more or less white, composed of some 12 per cent. of solids and the remainder of water, containing fat, milk sugar, lactalbumin and casein, various mineral salts, some ubiquitous bacteria, and certain so-called accessory substances or vitamins. Despite this apparent simplicity the production of milk, the processes to which it is subjected, the products which are manufactured from it, its transportation, its value as an article of commerce and as a food product, its relation to the human organism in health and disease, and last, but not least, the voluminous laws which have been reared about it form a subject which may nearly defy the knowledge of a single individual.

A discussion of the various diseases borne by milk, chiefly bacterial in nature, would hardly be complete without some mention of certain other diseases, not so much borne by milk as due to qualities inherent in milk or due to the lack of certain factors necessary to growth and development supposed to be inherent in milk.

The first of these, entirely in a class by itself, is an allergy or sensitization to the protein of cow's milk, met with, although rarely, in infants who cannot ingest cow's milk without suffering from certain digestive symptoms as a result thereof. These cases are handled in two ways, either by substituting for cow's milk the milk of some other animal, such as the goat, or by attempting desensitization with gradually increasing doses of the offending protein. In this connection it may be well to mention that goat's milk contains only one-third as much iron as cow's milk, and its continued use may give rise to a severe anemia.

Interest in the deficiency diseases, or those due to the lack of certain vitamins popularly supposed to be present in sufficient quantity in raw human and cow's milk, has received considerable impetus of late years, and in general our understanding of scurvy and rickets has become much clearer than formerly. As far as milk is concerned, the chief importance of these diseases lies in the fact that their prevention is given as the greatest argument against the proper sterilization of milk to be used as an article of human diet.

Infantile scurvy, as we all know, is due to a lack of the antiscorbutic vitamin C in the dietary. That scurvy may occur in the breast-fed baby or in the baby fed exclusively on raw cow's milk is not generally known. Milk at best is a variable and unsatisfactory vehicle of vitamin C. This vitamin, however, is contained in abundance in orange juice and in the juice of tomatoes, fresh or canned, and the addition of either of these juices to the diet will cure the scorbutic baby and prevent the occurrence of scurvy in the well.

Rickets, on account of its much greater fre-

quency and its permanent sequelae, is a disease of far more importance to the pediatrician than is scurvy. Evidence seems conclusive that rickets is due to an inadequate or faulty metabolism of calcium and phosphorus; although both these elements may be sufficient in the diet, the proper ionization of calcium and the deposition in the bones of calcium phosphate is lacking. Radiant energy, as furnished by unfiltered sunlight or the ultraviolet ray, or fat-soluble vitamin D, as contained in cod liver oil, exert a regulatory influence on calcium and phosphorus metabolism, furnishing something to the body which enables it to assimilate and hold lime salts.¹

Hess and Unger² believe that rickets is far more common than is generally supposed, accepting beading of the ribs as the most important clinical sign of the disease. A negative x-ray they consider of little value in determining the diagnosis of early rickets, although valuable in judging whether or not rickets is healing, and whether a therapeutic agent is of value. They concur in the universal finding that the inorganic blood phosphate is generally diminished in the early stages of the disease. These authors found that a group of well nourished breast-fed infants examined clinically and by roentgen ray at the end of March showed rickets in more than 50 per cent. of the cases, and that almost all bottle-fed infants gave some indication of the disease. The seasonal factor mentioned has, of course, been noted by other observers. The late winter and early spring months, following the period of diminished sunlight and the period when man and animal eat less of the leafy foods and consequently store less vitamin, are the months when the blood phosphorus is at its lowest ebb in adult and infant, and when acute rickets makes its appearance.

If milk, then, was considered a necessary source of vitamin D—the anti-rachitic vitamin—it would be important to know that boiled milk, according to Hess,³ is less liable to induce the deficiency diseases than is pasteurized milk, due, he believes, to the fact that the long-continued exposure to heat in pasteurization has a more destructive action than a short boiling. Two factors he believes to be of importance in the destruction of the anti-scorbutic vitamin: first, ageing in itself, and second, ageing with the added factor of heating to a certain degree. The possibility of oxidation during the ageing period may be the destructive factor. It is interesting, although relatively unimportant, to know that condensed milk and spray-dried milk contain their vitamins, certainly the anti-scorbutic vitamin, unimpaired.⁴ Milk, however, is generally considered to be a poor conveyor of the most important vitamin—the anti-rachitic one.

Enough has been said, perhaps, to show that

even raw milk may not contain sufficient amounts of these necessary substances; that the addition of orange or tomato juice to the diet supplies them in abundance; and therefore that their loss cannot be used as a logical argument against the proper sterilization of milk either by pasteurization or by boiling.

By virtue of its excellence as a culture medium milk, once infected, may become a carrier of almost any pathogenic organism. Only certain ones, however, are of practical importance from a public health standpoint. Asiatic cholera has been borne by milk, but rarely, as the spirilla do not survive long in this medium. Anthrax spores may be conveyed in milk, but this again is an unusual occurrence. Infection with milk-borne rabies is uncommon enough to be a curiosity. Cowpox has been known to be carried in milk, but this possibility is also remote. Milk-sickness or trembles, caused by *Bacillus lactimorbi*, whose spores resist pasteurization, is peculiar to the United States west of the Alleghanies. In man this infection causes vomiting and constipation and carries with it a mortality of 10 per cent. There is still some question as to whether contagious abortion in cattle is transferable to human beings. Bacillary dysentery and para-typhoid fever may be classed with typhoid as milk-borne infections.⁵ In localities where unpasteurized goat's milk is consumed, notably in Arizona, Texas and Mexico on this continent, Malta fever in man is not uncommon. This remarkable disease, according to Osler, occurred in the Malta garrison in the seven years 1898-1904 in 2229 cases, with an average case duration of 120 days and with 77 deaths. It is characterized by "undulatory pyrexial relapses, profuse sweats, rheumatic pains, arthritis, and an enlarged spleen." Although the average duration of the disease is three months, the series of relapses may last over two years.

The most important infectious diseases due to milk are typhoid fever, diphtheria, scarlet fever, septic sore throat, the enteric infections of infants, and bovine tuberculosis. Of these diseases typhoid fever, diphtheria, scarlet fever, and infantile diarrhea are due, when milk-borne, to the contamination of milk from human sources. No proof of the rôle that milk plays in the causation of these epidemic diseases in a considerable proportion of their cases is needed.

Kelley and Osborn⁶ have analyzed all cases of diphtheria, scarlet fever, septic sore throat and typhoid fever coming to the attention of the Massachusetts Department of Public Health between the years 1909 and 1913. The data subsequent to 1914 are particularly valuable, because in that year a regulation of the State Department of Health made the reporting of all cases of typhoid fever, scarlet fever and diphtheria mandatory when occurring on premises where milk is handled or produced. In September of that year, also, septic sore throat was

made reportable. A study of the total outbreaks occurring show 4 out of 117 of scarlet fever due to milk, 7 out of 10 of septic sore throat, 1 out of 171 of diphtheria, and 16 out of 84 of typhoid. They conclude that milk as a source of diphtheria is practically negligible; that milk-borne scarlet fever is unusual, but that milk-borne typhoid is a more serious epidemiological problem. Increased, efficient pasteurization is suggested as the remedy.

Septic sore throat, highly infectious, rapidly incubating, swiftly spreading, is almost always traceable when occurring in epidemic form, to an infected milk supply. In this disease, however, as in tuberculosis, the milk is infected from the diseased animal rather than contaminated from outside sources. The epidemic of Portland, Oregon, of 1922, analyzed by Benson and Sears,⁷ included 487 cases of septic sore throat with 22 deaths, occurring almost exclusively among the customers of a single raw milk dairy. On investigation of the herd supplying the dairy one cow was found to have an udder infected with hemolytic streptococci of the human type. A milker on this farm was discovered who had a mild sore throat with inflamed tonsils, from which a culture of streptococci was obtained, identical with that obtained from the cow. The inference was that the milker had infected the cow and the milk from this cow, being included at some time with that of the herd, had given rise to the epidemic. The epidemic occurring in Boston a few years ago and traced to milk from a well-known dairy will be generally recalled.

The relation between an unclean and infected milk supply and infant mortality is becoming more and more obvious. The decline in the so-called infectious diarrheas of infancy in our large cities, coinciding with more universal pasteurization of milk is clinical evidence in favor of this relationship. The residual incidence of these diseases may be ascribed to imperfect pasteurization, improper care of milk before and after pasteurization, and perhaps more especially to ignorance and carelessness of those who have to do with the handling of the milk in the home. No matter how carefully the production and transportation of milk may have been supervised; no matter how wholesome it may have been when left on the doorstep, the use of dirty hands and unclean utensils and failure to keep properly cooled may allow a lethal infection to enter between that stage and the infant's stomach. Public opinion, intelligently honest production, and sensible laws may eventually provide for a safe milk as delivered, but until education of the individual ensures its proper care in the home there will always be a weak link in the chain.

It is a deplorable fact that physicians are still to be found who will advise their patients that bovine tuberculosis is not transferable to man. This ignorance is inexcusable in the light of our

present knowledge of the subject, dating back to 1898, when Theobald Smith demonstrated, in spite of Koch's opposition, the difference between the two types. Later Koch was forced to acknowledge the correctness of Smith's observations, for on morphology, cultural characteristics and animal inoculation he definitely proved his point, that the human and bovine bacilli represent two distinct strains. Further experimentation with material obtained from human lesions has proved as conclusively that the bovine type is infectious for man.

The British Royal Commission of 1911,⁸ investigating this subject, came to the conclusion that "whatever may be the animal source of tuberculosis in adolescents and in adults, there can be no doubt that a considerable proportion of the tuberculosis affecting children is of bovine origin." Sir Harold Stiles of Edinburgh in a large number of cases of cervical adenitis in children found the bovine type in 90 per cent.—a commentary on the incidence of tuberculosis among the Caledonian cattle, and on the Scottish custom of feeding raw milk to children—and Griffith,⁹ in 102 glands examined by inoculation, found that 72.1 per cent. of children under 10 years had the bovine type.

Gordon and Brown,¹⁰ working at the Boston Children's Hospital and differentiating by rabbit and guinea pig inoculation and by culture, in a series of 30 cases under 12 years of age identified the bovine organism in 10 instances. Stone¹¹ cites an epidemic of cervical adenitis with at least one case of tuberculous meningitis occurring in a group of children deriving their milk supply from a high-grade certified dairy. A tuberculin test showed about a dozen cows reacting, one with a tuberculous udder.

It is generally recognized that the more chronic forms of non-pulmonary tuberculosis in children are most liable to be of bovine origin. It must be borne in mind, however, that these chronic forms, such as cervical adenitis, bone and joint tuberculosis, and abdominal tuberculosis may break down the lines of defense and overwhelm the body with a generalized or milary tuberculosis with its pulmonary and meningeal manifestations.

The primary lesion of a bovine infection in the child is usually, if not always, in the alimentary tract; frequently in the tonsils or adenoids; otherwise in the intestine. The extension is by way of the lymph channels to the cervical glands or mesenteric lymph nodes, by direct extension to the peritoneum, or by the blood stream to bones and remote organs. If the blood-borne infection is massive, the meninges, lungs and other organs are involved and the patient dies of a milary infection.

The incidence of tuberculosis among our cattle is variable, but present to a degree that few suspect, the annual loss in the United States amounting, it is said, to at least \$40,000,000.

The percentage infected varies in different States, from 1 to 30 per cent. of the cattle population, the middle western, western and southern States having been infected originally by cattle shipped from the East.

The tuberculin test, subcutaneous, intradermic, or ophthalmic, is the most reliable way of discovering the presence of infection, the intradermic test, applied at the base of the tail, being the most frequently employed. It must be borne in mind in this connection that a positive tuberculin test does not necessarily mean a cow with active tuberculosis, but it does indicate positively, as does the test in man, the presence of an active or inactive focus of tuberculosis, and to protect the herd that animal must be removed, for it is by those reacting animals that do have active foci that the infection is spread in a herd.¹²

Tuberculosis among cattle will eventually disappear through federal and state eradication work, and its incidence in man may be prevented by this means and by sterilization of milk, but there is still room in our Commonwealth for improvement in the treatment of the non-pulmonary type of case, whether human or bovine in origin. It is sincerely to be desired that the recommendation of the State Department of Public Health for an adequate and fully equipped institution for the treatment of non-pulmonary tuberculosis will be favorably acted upon by the Legislature.

The methods by which a dirty and contaminated milk may be produced are many. Some of the ways in which tuberculosis may be spread have been mentioned. Insufficient sunlight and inadequate ventilation of stables may favor its spread. Diseased cows cannot produce a clean milk. The open milk pail, a trap for the infected material that drops from dirty cows, favors a high bacteria count. Unsterilized utensils cannot long contain a sterile milk. If a typhoid privy drains into the bathing hole the bacteria that drop from the cow's flanks may not always be harmless, and a high lactic acid bacillus count is preferable to a low count of typhoid bacilli. Diseased milkers cannot long handle a milk and have it remain safe. Bacteria will increase rapidly in an unchilled milk, or in a milk that has stood for hours in the sun on a station platform, and improper pasteurization is of little value in safeguarding the health of our children. Dirt from various sources may collect on the ordinary milk bottle cap, and the cap may be removed and replaced with no one the wiser. The whole route from the cow to the doorstep is beset with possible dangers unless honestly and efficiently supervised.

Various stages have been passed in the attempt to secure a pure milk supply, and various interested parties have concerned themselves with the problem. Unfortunately they have not always viewed each other entirely without sus-

picion. The farmers and the granges have been suspicious of the reforming consumers, and the consumers have unduly criticized the farmers for their mercenary attitude in opposing reforms—reforms which imposed increased labor and expense on the farmer without guaranteeing him an increased price for his product. As usual, the law-making bodies have been besieged on all sides with a resulting voluminous mass of legal standards which have not yet entirely fulfilled their purpose—that of providing a safe milk for human consumption. Too much emphasis has always been placed on chemical purity and little enough on the types of bacteria allowable—and a bacteria count, while some indication of the cleanliness with which a milk has been produced and the care with which it has been prepared for shipment, does not indicate the pathogenicity of its bacterial content.

Our present Massachusetts laws, in brief, provide for a milk that contains not less than 12 per cent. of milk solids and 3.35 per cent. of fat. Grade A milk must be produced within the Commonwealth from healthy cows under cleanly and sanitary conditions, and so cooled and cared for that in its raw state the bacteria count shall not average more than 100,000 per cubic centimeter. Pasteurization is legally defined, but no milk is required to be pasteurized and no cow is required to be tuberculin tested by state laws.

In New York City, in contrast to this, four grades of milk are provided for, varying in their price. Grade A raw milk, the only milk that may be sold raw, must come from tuberculin tested cows, must be produced under conditions similar to those of certified milk, and the bacteria count is limited to 60,000 per cubic centimeter. Grade A pasteurized milk need not come from tuberculin tested cows, but the allowable bacteria count is limited to 200,000 before and 30,000 per cubic centimeter after pasteurizing. Grade B, pasteurized only, may have a bacteria count of 1,500,000 per cubic centimeter before pasteurizing in the city, 300,000 before pasteurizing in the country, and 100,000 after pasteurizing. Grade C, pasteurized, may have a maximum bacteria count of 300,000, and must be labeled, "For Cooking Purposes Only." Milk may be pasteurized but once.

One objection raised to the pasteurization of milk, that based on the slaughter of the vitamins, has been mentioned. The chief argument used by its opponents, however, is that it encourages the production of dirty milk and careless handling. It is true that pasteurization was originally practiced as a commercial enterprise to prevent the souring of milk before it reached its market. Our present advocacy of pasteurization, is of the pasteurization, properly performed and controlled, of a milk decently produced.

The effectiveness of pasteurization in killing the tubercle bacillus has been questioned but

seems to have been settled effectively by Bartlett,¹³ who found that pasteurization by the holding method between 142° F. and 148° F. for 30 minutes destroyed the bacillus in every instance. It is also interesting to note that in his experiments specimens of raw milk taken from mixing vats in various New Haven dairies showed the presence of tubercle bacilli by guinea-pig inoculation in 44 per cent. of the specimens examined.

Certified milk is considered as the product of dairies operated in accordance with rules and regulations formulated by authorized medical commissions to ensure its purity and adaptability for infants and invalids. The veterinary inspection of herds and farms, the medical inspection of employees, bacteriological and chemical examination and rapidity of transportation are provided for.

The production of certified milk has been a valuable demonstration of the methods by which a pure milk can be obtained, and the degree of purity which can be effected by the employment of these methods. Unfortunately, in this particular enterprise also, the human element enters in, as at least one unfortunate experience with certified milk has shown. If properly carried out, the rules under which certified milk is marketed will ensure a milk of uniform excellence. The question may be raised if some of the refinements are not unnecessary and the price therefore unduly high.

In general, however, the rules governing the production of certified milk should be approximated by all dairies. The principles involved are set forth by the Department of Agriculture, which tersely defines clean milk as "milk of good flavor from healthy cows, that is free from dirt and contains only a small number of bacteria, none of which are harmful." In the production of such a milk the importance of the disposal of wastes from human and animal sources is emphasized, as is the importance of the fly as a carrier of infection. The causes of high bacterial counts and their remedies are summarized:

Sources of Trouble.—Body of the cow. Unclean utensils. Growth of bacteria.

Remedy.—Clean cow. Small top milking pails. Thorough washing and sterilization. Prompt cooling and storing at low temperature.

In an experiment with open, sterilized pails, fresh milk from dirty cows was found to have an average bacteria count of 55,208 per cubic centimeter; from clean cows the average count was only 4947 per cubic centimeter. With small-top pails, in another experiment, the average count was 29,263, and with open pails 87,380.¹⁴

In emphasizing the importance of clean production and proper sterilization of milk for direct human consumption it must be remembered that the same rules should apply to the common products of milk, such as cream, ice cream, and butter.

The Federal Bureau of Animal Industry took up the eradication of tuberculosis from the herds in the District of Columbia in 1910. Congress in 1917 adopted legislation providing for tuberculin testing and eradication work in coöperation with the various States, and at the present time every State in the Union, together with Alaska and the Hawaiian Islands, is engaged in the task. Massachusetts, the last State to adopt this measure, entered upon the work under an Act of 1922. By this Act owners may have their cattle tuberculin tested by the state inspectors and may receive as indemnity for their condemned cattle one-third of the difference between the amount received by them for the carcasses of the animals and the value of the animals as determined by appraisal, provided that in no case shall payment by the Commonwealth exceed \$25 for any grade animal or \$30 for any pure-bred animal. The Federal Government also pays one-third of the difference, and the balance of the loss is borne by the owner.

This general campaign is conducted along two lines: Herds, on application of the owners, may be tested by state and government officials, the owner agreeing to certain conditions, such as the removal of reactors. Herds found free from tuberculosis on two annual tests are accredited and a certificate given by the State and Federal Governments. Animals from such herds may be shipped interstate without further tuberculin testing for a year. By the system of area eradication a unit territory, generally a county, is worked with the coöperation of the owners, the county bearing part of the expense.

Already in Massachusetts, 150 herds containing over 2500 cattle have passed one test, 85 herds with 3114 cattle are accredited, and 250 herds are under supervision.

Enough has been said to show that milk, unless properly controlled in its production, may harbor a menace to public health. In this State it is not properly controlled, although there is no question but that its status has been gradually rising since the Seythians, according to Herodotus, first gathered mare's milk and made it into butter. Modern methods of production are not as modern as we may believe them to be, for we have a good account of the Willow-bank dairy, operating in Edinburgh over a hundred years ago under very satisfactory conditions, with the possible exception, we presume, of tuberculin testing. Such examples, however, were not the general rule, for in the salesroom of the average dairy a pump, "the cow with the iron tail" of Dickens, was almost a universal necessity.⁵

Cristadore¹⁵ has divided the past and future of the dairying industry into seven ages:

- "1. The Neglect Age.
- "2. The Water Age.
- "3. The Skim Age.
- "4. The Preservation Age.

"5. The Tuberculosis Age.

"6. The Pasteurization Age.

"7. The Golden Age, when all milk shall be 'certified' in the full and sanitary sense and meaning of the term as to environment and methods, machine clarification to take place immediately after the milking, when the milk is fresh from the cow and before germ multiplication has commenced, either from the foreign matter or from the slimes already present in the milk; then cooling and bottling at the farm, pasteurization after bottling, to make assurance doubly sure."

To these should be added tuberculin testing of all cattle and the removal of reactors, and a price for the milk, still the cheapest food commodity we possess, sufficient to enable the producer to carry out these measures.

This golden age will come, not from improved statutes, but from education of the people, largely through the medical profession, sufficient to teach them the true value of a clean milk supply. In this way a universal popular demand will be created which will automatically accomplish the desired results.

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REFERENCES

- 1 Park, E. A., Guy, R. A., and Powers, G. F.: *Am. Jour. Dis. of Child.*, 25, 103, 1923.
- 2 Hess, A. F., and Unger, L. J.: *Am. Jour. Dis. of Child.*, 14, 327, 1923.
- 3 Hess, A. F.: *Am. Jour. Dis. of Child.*, 14, 337, 1923.
- 4 Cavanaugh, G. W., Dutcher, R. A., and Hall, J. S.: *Am. Jour. Dis. of Child.*, 25, 498, 1923.
- 5 Heinemann, P. G.: *Milk*. W. B. Saunders, 1919.
- 6 Kelley, E. R., and Osborn, S. H.: *Am. Jour. of Pub. Health*, 10, 1, 1920.
- 7 Benson, A. L., and Sears, H. J.: *Jour. Am. Med. Assn.*, 80, 1608, 1923.
- 8 Report of the Special Milk Board of the Massachusetts State Department of Public Health, Dec., 1915.
- 9 Griffith: *Lancet*, 1, 216, 1917.
- 10 Gordon, J. K., and Brown, E. W.: *Am. Jour. Dis. of Child.*, 25, 234, 1923.
- 11 Stone, J. S.: *Boston Med. and Surg. Jour.*, 188, 272, 1923.
- 12 U. S. Department of Agriculture: *Farmers' Bull.* No. 1069.
- 13 Bartlett, C. J.: *Am. Jour. of Pub. Health*, 13, 807, 1923.
- 14 U. S. Department of Agriculture: *Farmers' Bull.* No. 602.
- 15 Cristadore, L.: *Dietetic and Hygienic Gaz.*, Dec., 1912.

DELIVERY OF SHOULDERS IN ITS RELATION TO PERINEAL LACERATIONS

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So much has been written on perineal lacerations and their prevention, that one hesitates to say anything more, but observations made below have so impressed me that I feel no harm will be done by calling attention to them.

All writings and text-books on obstetrics call attention to the foetal head in its relation to perineal lacerations and duly impress on the obstetrician the importance of careful delivery of this presenting part for the avoidance of lac-

erations, but in most cases the relation of the shoulders to these perineal tears is ignored.

With a cephalic presentation, as the head "crowns" and thus stretches the perineal tissues to the utmost, it is rare, especially in primiparous patients, for the tissues in this region to maintain their integrity. It is usual to find at least a small solution of continuity of the skin in the vicinity of the central perineal raphe, and this small break may extend itself into the deeper muscular layer or up into the vagina, unless extreme care is taken as the head is delivered; but in the majority of cases the attendant watches, at this time, to prevent this bad effect from the cephalic presenting part and as he notes the head is delivered with a very small laceration, he congratulates himself on the good result, but at this point the "watchful waiting" is abandoned and little thought is given to the next stage, the delivery of the shoulders.

After delivery of the head external restitution takes place and this is the result of the rotation of the shoulders under the arch, so that at this time the shoulders lie in a direct antero-posterior position or in one or the other of the oblique diameters. While it is true that the head is the largest and least malleable part and since that was delivered, sufficient room must be present for the delivery of the shoulders, these latter, unless delivered properly by being allowed to mold into a small diameter, actually present a definite impediment to delivery because of their size or position.

If after delivery of the head, strong traction is used to deliver shoulders, it will be noticed that the posterior shoulder impinges on the perineum in about the exact spot of the initial small perineal laceration and that continuance of this posterior shoulder pressure increases the depth and extent of this initial laceration, so that a gutter is formed, through which the posterior shoulder is delivered; this increase in depth and extent of laceration is increased in direct proportion to the resistance offered by the anterior shoulder as it impinges on the pubic arch. Thus it is common, after careful delivery of the head, with a very small "nick" in the perineum, to find, after completed delivery of the baby, an extensive laceration of second or even third degree.

In the above I am calling attention to conditions in a fairly normal type of case, where ordinarily we are chagrined to get more than a first degree tear.

How can we prevent this increase in extent of perineal laceration by the shoulders?

This is best done by remembering the anatomical relations and normal mechanism of labor and above all slow careful delivery of the shoulders, ever remembering that careful delivery of the head is only one stage in the operation

and that the body to follow is worthy of the same care in delivery.

After external restitution of the head has taken place, with the preceding rotation of the shoulders, firm but gentle traction downward on the head, assuming a lithotomy position, will sink the posterior shoulder backward and slightly upward in the vagina and simultaneously bring the anterior shoulder under the pubic arch; at this time rapidity of delivery is rarely necessary and care can be taken by frequent observation, to see if undue pressure is made on the perineum and if the anterior shoulder is molding into place under the pubes. Assuming that the latter is taking place, then traction outward, with a gradual upward swing, will deliver the anterior shoulder from under the arch and thus markedly increase the room for the posterior shoulder; traction now continued upward in the curve of Carus will complete the delivery of the baby. In certain cases the shoulders, either due to abnormal size or to some other abnormality, will become impacted and are difficult to dislodge. In these cases all traction should still be gentle and the fingers of one hand inserted into the vagina and if antero-posterior position is present, by pressure on the shoulders thus be converted into an oblique position and thus delivery facilitated; if an oblique position, disengage if possible by direct shoulder pressure and rotate slightly and by virtue of disengagement of the impaction, delivery may then be fairly easy. If the impaction persists, then we must be governed by the circumstances, with the cardinal principles adhered to of gentle, though firm manipulation and remembrance of dangers not only to the child's bony and nervous tissues but the perineum and vaginal tissues of the mother.

PRIMARY ACUTE INFLAMMATION OF THE GREAT OMENTUM— CASE REPORT

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Hospital.]

IN reviewing the literature on pathology of the great omentum one encounters descriptions of new growths, torsion, trauma and inflammation. The inflammatory processes described were secondary to or associated with such conditions as perforated viscous, acute appendicitis or pelvic inflammation. The following case presented none of these features, simulated acute appendicitis, and therefore deserves recording.

C. M., male, age 41, Hosp. No. 3468. Occupation, shipping clerk. Chief complaint: Severe pain in right lower abdomen. Family history: Irrelevant. Past history: Diseases of childhood

not remembered. Meningitis at sixteen. Pneumonia one year ago, with gradual convalescence and subsequent unusual gain in weight. No history of previous operations or injuries. Has always been subject to frequent colds and sore throats. For the past few years has noticed a soreness over lower abdomen to such an extent that a belt could not be tolerated.

Present illness: Began four days prior to admission with severe pain, sharp and steady in character, confined to small of back. Two days later it shifted to the right lower abdomen and remained there, being most acute over an area the size of a silver dollar. In addition, there was a feeling of weight ready to burst from his body. A severe headache existed, and although neither nausea nor vomiting were noted, diarrhea persisted on the two days preceding admission. The abdominal pain gradually increased in severity.

Physical examination: Well developed and nourished man. Except for throat and abdomen, examination was negative. Throat: Acute pharyngitis. Abdomen: Slightly distended, no visible masses or peristalsis. The usual rise and fall with respiration were withheld. Percussion revealed nothing save a suggestion of decreased tympany over lower right quadrant. No free fluid noted. Palpation revealed the presence of marked tenderness over McBurney's point. Muscle spasm present over this area. Pain elicited over abdomen when patient attempted to turn in bed.

The clinical features offset the physical findings. Temperature 98.6, pulse 80, respiration 22. White count 14,000. Urine normal. Excluding these findings and placing more confidence in the patient's story and the physical examination, a provisional diagnosis of acute appendicitis was made, immediate operation advised and accepted.

Operation: Generous right rectus incision through a moderately obese abdominal wall, under ether anaesthesia. Exploration of abdominal cavity. Four factors noted: Small amount of cloudy, free fluid, chronic adherent appendix that was removed, acute localized inflammation of the omentum, and reddened area of parietal peritoneum at point where omentum had adhered over McBurney's point. The lower margin of the omentum was affected over an area 2.5 cm. x 10 cm. The tissue was brawny, highly injected, and composed entirely of fat. No free pus was noted. Outside of this margin the only other involved portion was an inflamed fatty cord enclosing blood-vessels that descended and became a part of the area chiefly affected. The omentum was delivered and examined. No palpable nodes felt. Affected portion of omentum removed. Abdomen closed tight.

Uneventful recovery; wound healed by first intention. Discharged on fourteenth day, free from the general soreness that had preëxisted the acute attack.

Conclusions: Acute, localized inflammation of the omentum, secondary to no detectable intra-abdominal lesion. Probably embolic. Abdominal pain and tenderness due to involvement of sensitive parietal peritoneum. Coincidental chronic appendix.

PHAGEDENIC GINGIVITIS

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THE name of phagedenic gingivitis has been given to designate the condition variously known as Vincent's infection, acute ulcerative gingivitis, trench mouth, etc. None of these is specific, however; the name of Vincent's infection, in particular, which is used by many, may be confused with another bearing his name, and the one of acute ulcerative gingivitis does not accurately describe the condition as found and may be used to designate another sometimes observed in the oral cavity. The pathology present in a typical case of phagedenic gingivitis shows that large masses of the soft tissue of the mouth are rapidly destroyed, therefore the name of phagedenic gingivitis given by Dr. Paul R. Stillman of New York would seem to be the most accurate. Previous to the beginning of the late great war cases of the disturbance were observed occasionally. In the early part of the encounter, an epidemic of an acute ulcerative condition of the mucous membrane of the oral cavity was observed among the men, which, as the result of long exposure in the first line trenches and the severity of the service due to long periods without relief, became marked. The disease was often observed first in the tonsils after which it progressed until the marginal gingiva of the teeth were involved or it was found in the latter location only. (The marginal gingiva is that portion of the mucous membrane which is adjacent to the tooth cervix.) For a time the exact nature of the disturbance was either overlooked or unknown, but in any event it spread rapidly and attacked great numbers of men before any serious attention was given to it or its treatment. Since the close of the war and the return of our men, many cases of the disease have appeared in this country until today patients, both men and women, present lesions due to the disturbance in ever-increasing numbers. It is the frequency with which these cases occur and the improper diagnoses which are made, often, that has prompted the writing of this article.

The disease has certain characteristic diagnostic symptoms which are unmistakable. The writer in his periodontal work has many referred cases sent to him by fellow dentists which

are diagnosed often as pericementoclusia (incorrectly called pyorrhea alveolaris) but the difference between the two conditions is marked as may be seen by the appended table.

	<i>Phagedenic Gingivitis</i>	<i>Pericemento- clasia</i>
Onset	Rapid	Slow
Tenderness	Marked	Not marked even in late stages
Hemorrhages	Profuse	Not marked
Odor	Characteristic metallic	Not marked in early stage, rather foul in late stage
Ulceration	Marked	Not visible altho present
Sloughing	Marked	Not seen
Outline of Marginal Gingiva	Wasting	Thickened with no perceptible wasting
Interdental papilla of the mucous membrane	Cupped out; very characteristic	Round, but otherwise intact—some recession
Mobility of the Tooth	Absent	Seen in advanced cases—not seen in early ones
Pus Discharge	Not seen	Often seen
Bacteria present	Spirillum Fusiform bacillus of Vincent.	Mixed infection Staph.-Strep. and other organisms
Discomfort	Marked	Not noticeable except in late stage

The disease by reason of its acuteness is of sudden origin and in the early stage may be localized but the use of toothbrush or some other agency no doubt tends to carry or spread it to various parts of the mouth. The writer has in mind a case of a heavy smoker who presented himself with lesions which affected the marginal gingiva of the palatal surfaces of the upper incisors only. After several visits, the acute symptoms subsided and the patient's visits ceased prematurely. After a period of two months he returned with lesions in other parts of his mouth for which the cessation of the treatment period before the progress of the disease was really checked, smoking and the use of the toothbrush were responsible.

Hemorrhages are common and are usually the first symptom that the patient notices of a change from normal, a condition which forces him to seek the practitioner's advice. A blood stain on the pillow, after a night's sleep, is a usual complaint. The marginal gingiva is found to be extremely tender to touch, a condition

which is not improved by the use of the toothbrush. This symptom is one means of differentiation between this and the chronic forms of periodontal pathology which are found in so many mouths and with which the disease that we are considering has been confused. The tenderness present in phagedenic gingivitis may be so marked that a cotton pellet passed lightly over the lesion will cause severe pain. The ulcer which forms is composed of necrotic epithelium and its underlying tissue, plus a creamy exudate in which is found the bacteria responsible for the disturbance. Cultures from a smear show the constant presence of two species of bacteria, namely, the fusiform bacillus of Vincent and the spirochete; both these bacteria are always found in the ulcerous tissue. This may vary in extent, from one or more single isolated focus which involves the mucous membrane of two teeth only to larger ones caused by a coalescence of two or more areas which may involve the mucous membrane of many teeth. In cases of pericementoclusia (pyorrhea alveolaris), particularly where pocket formation and more or less disintegration of the fibres of the periodental membrane is in progress, the ulceration may involve the deeper tissues and expose the crest of the alveolar process. When this condition exists the destruction of the mucous membrane proceeds with more rapidity than where there is no previous periodontal involvement. These cases may often involve the buccal or lingual mucous membrane and affect the floor of the mouth.

The area adjacent to the ulcerous tissue is fiery red in color and bleeds readily and copiously if the ulcerous conglomerate is removed. A characteristic and almost unailing ocular diagnosis is the appearance of the interdental papilla. In a condition of health, this portion of the mucous membrane, which fills the spaces between the teeth, presents a V-shape with thin margins closely attached to the tooth cervix. The color varies from a light to a dark pink. In the presence of this disease the color is changed as stated and the point of the V is destroyed. Instead there is a cupping out which gives it a concave appearance.

The breath has a strong metallic odor particularly when the disease has made much progress. Neurotic disturbances are often present, such as uneasiness, loss of sleep and mental depression. The writer had a case, recently, a young woman of twenty-two, whose practitioner had treated her for bleeding gums, as she expressed it, and she naturally supposed that such was the condition present. When informed of the true nature of the disturbance, she exhibited extreme neurotic symptoms bordering on collapse: loss of color, excitability, weakness in the limbs, and abdominal pains accompanied by contractions of the stomach. This is the most extreme case that the writer has ever observed,

although less severe symptoms have been manifested by other patients. In addition to other symptoms, some temperature is present, often. Stillman and McCall, in their recent book on Clinical Periodontia, reported this as an invariable occurrence in forty-two reported cases. Phagedenic gingivitis is a highly infectious as well as contagious disease. It may be contracted in the usual manner of all diseases of this nature, such as kissing, drinking or eating from contaminated utensils, tableware, etc. One young woman, who inquired of the writer regarding the manner in which she might have contracted the disease, informed him with much nonchalance, that she thought she might have done so by drinking from a pocket flask which contained liquor passed around among her set at a dancing party.

The treatment of this disturbance is not particularly difficult, but it must be borne in mind that the disease is a highly virulent one and that treatment must be decisive and thorough and should be continued for a time after the ulceration has apparently disappeared. The bacteria often remain hidden in the folds of the mucous membrane for some time. Cases of recurrence a short time after discharge are not uncommon and, even though the tissues would seem to have returned to normal, close watchfulness for any returning symptom should be observed. The writer has had uniform success with the method advocated by Dr. J. Frank Adams, of Toronto, which is as follows: Pour a small quantity of Churchill's iodine (which is a 17 per cent. solution) into a suitable dish. In another pour a small quantity of 10 per cent. nitrate of silver. Make two small cotton swabs with toothpicks and absorbent cotton. One of the toothpicks is laid across the rim of each dish. Several Johnson & Johnson (Nos. 2 and 3) cotton rolls are cut into four equal lengths and placed on the tray near the dishes. Small pellets of cotton about one-fourth inch in diameter, at least a dozen in number, are then prepared. The area to be treated is isolated, using the cotton rolls to prevent the saliva from flowing over the surface. A cotton pellet is taken in a pair of pliers and the ulcerated surface is gently wiped with it. One of the cotton swabs is dipped into the Churchill's iodine and applied to this area; while still wet the other swab is dipped into the silver nitrate and flowed over the iodine. Immediately there is a chemical reaction which results in formation of silver iodid which penetrates the ulcerous mass but does not affect the adjacent healthy tissue. The patient is instructed to return every day for this treatment which is continued until discharge. In addition to this a mouth wash of perborate of soda is prescribed for home use. Care should be taken that the powder is absolutely fresh when purchased. Patients should be warned not to accept it from a broken pack-

age, as exposure to the air lessens its efficiency as an oxidizing agent. Reliable druggists now sell perborate of soda in quarter pound instead of pound boxes, as heretofore, which makes it more desirable to use. The patient is instructed not to expose a broken package to the air any more than is absolutely necessary during use. From one to two teaspoonfuls in a glass of warm, almost hot water, repeated every half hour during the day and evening, is prescribed as a mouth wash. Patients should be taught to rinse the mouth in a thorough manner so that food particles may be dislodged as nearly as can be accomplished in this way. The writer gives instructions to take some of the wash in the mouth, close the lips and with contractions of the buccinator muscle of each side, the wash is forced from left to right much as the water in a washing machine. In addition to the wash the writer has found it of advantage to instruct the patient to lay some of the dry soda on the accessible areas with the broad end of a wooden toothpick before retiring, stress being laid on the fact that this should be done gently so as to prevent bleeding. The use of the soda as a wash is of great assistance in treatment and should be continued for at least from two to three months after dismissal. The daily visit to the practitioner in charge of the case will aid in keeping the oral tissues in a cleanly condition.

Removal of the exfoliated ulcerous conglomerate, due to the action of the silver iodid, is necessary for the maintenance of oral health as well as an aid in preventing the black stain which often forms on the tooth due to the action of the silver. When this occurs the writer has found that it may be removed by polishing except where the tooth surface is either eroded or etched. Instrumentation by the dentist, even when it would seem to be necessary, is contraindicated during the acute stage. Deposits of calculus may and should be removed after the first symptoms have subsided. Extraction of a tooth unless absolutely necessary should be deferred. The virulence of the disease is greatly accelerated by any laceration of the soft tissue, no matter how slight, and may lead to an involvement of the deeper periodontal structures. Mouth hygiene, as practised by the dentist, should be begun as soon as the early lesions show signs of improvement. This is absolutely necessary, as it is in the treatment of all oral pathology. An unclean mouth is not only a poor asset, but a decided detriment for the successful termination of all mouth diseases. Physicians who treat oral conditions of any kind would do well to bear this in mind.

There are other methods employed besides the one just described, but the writer has had such unflinching success with it that he has used no other. Probably one of the best known is to use a chromic acid solution, locally, and pre-

scribe a wash of potassium chlorate. Another is to touch the ulcers with a crystal of chromic acid, in the following manner: A piece of platinum or iridio platinum wire is looped on one end. A crystal of chromic acid is then engaged in it and passed through a flame. The crystal is dissolved immediately, and hardens inside the loop as it is quickly removed from the flame and allowed to cool. It is then applied to the areas. Neo-salvarsan, used intravenously, gives good results also, on account of its specific action on the spirochete, but it is not used by dentists to any extent. No agent which might prove to be an irritant, whether it be food or not, should be permitted to lie in contact with the mucous membrane. Smoking is forbidden as is the use of condiments such as pepper, chili sauce, etc.; vinegar and grapefruit will often produce more or less irritation, also.

The writer sincerely hopes that the medical profession will help the dental profession to check the progress of this disease and also that this article may help to bring about the accomplishment of an accurate early diagnosis to realize this end.

Medical Progress

REVIEW OF NEUROLOGY

BY ABRAHAM MYERSON, M.D., BOSTON

No review of neurological work in the past year can, without skimping, cover the whole field. Therefore, the reviewer has selected for presentation a few of the important and outstanding problems which confront medicine in this field.

There has been a great revival of interest in epilepsy, especially as the development of biological chemistry gave a new direction to research. Many men felt that in some occult and disordered phase of metabolism would be the key to the epileptic status. This expectation has not been fulfilled at the present writing. All that the work of any authentic kind has shown here and there in isolated cases is some abnormality in metabolism, but nothing of a constant nature has been discovered. One group of Danish workers has evolved the concept, "ammoniacal dysregulation," as explanatory of epilepsy. Unfortunately, ammoniacal dysregulation was found in other neuropathic disorders. They believe that parathyroid insufficiency is a source of the disease.

Contrasted with the organic conception of epilepsy, is the idea that, on the whole, it represents a temperamental disorder and has its roots in the personality of the individual. Some writers go even so far as to state that where the os-

tensible cause is syphilis, brain tumor, trauma, and the like, that the real cause is in the predisposition. L. Pierce Clark of New York has especially expressed this point of view, and other men have studied epilepsy on the basis of the psychology of the individual involved. Rosett, also of New York, has on the basis of a study of the tonic and clonic phases of epilepsy, concluded that epilepsy is a temporary reduction, disintegration, or extinction of the cerebral functions (this is not especially different from the Jacksonian concept), that the tonic contraction is analogous to the rigidity seen after the cerebrum is removed from experimental animals—the so-called decerebrate rigidity; the clonic phase being an alternating contraction of an antagonistic group of muscles. Rosett has found an analogy for the epileptic attack in reactions occurring with certain functions such as sleep, defecation, sneezing, coughing, parturition. These matters he calls the normal epileptoid reactions; in other words, Rosett finds epilepsy to be the accentuation of a normal type of reaction to a stimulus requiring sudden movement on the part of the organism.

The reviewer will not here state in detail his objections to Rosett's work; suffice it to say that there is an essential fallacy in the comparisons and an over-emphasis in similarities of a vague kind; for example, an essential phase of his hypothesis seems to be that a reduction of the conscious state is a necessary condition for the production of muscular contractions, and that any degree of narrowing the field of consciousness should result in some degree of muscular activity. The reverse would seem to be true; that, on the whole, disregarding sleep starts and somnambulism, sleep is a reduction of the field of consciousness and a reduction of activity; that narco-sis is a reduction of activity with a reduction of the field of consciousness.

The therapeutics of epilepsy are at present limited mainly to dietary and hygienic regulation and the use of luminal. The recent effort to control epilepsy by fasting has lessened the number of attacks during the fasting period, but it would seem here that the remedy is as bad as the disease. At the present writing it is better to consider each case of epilepsy by itself, to disregard such things as predisposition and hereditary tendency as "not proven," to search for toxic situations in the organism and conditions of organic pathology, to regulate the diet and the life of the individual, to treat any underlying condition, if that is found, to control the bowels, and to use luminal.

The situation in regard to neurosyphilis: The main problem in neurosyphilis at the present time is treatment. Progress in diagnosis has for all practical purposes reached a very satisfactory plane. The use of the various methods for obtaining and examining the spinal fluid, together with a better understanding of the clin-

ical signs, has brought our knowledge of the diseases classified under the term neurosyphilis, to an efficient working basis.

There is a marked difference of opinion concerning the value of intraspinal and allied methods of treatment. Dereum and Sachs of the older neurologists emphatically state that this treatment is wrong in theory and misleading in fact. Dereum especially states that the injection of salvarsanized serum into spinal fluid spaces is wrong in theory since the spinal fluid is not in the line of entrance to cord and brain, but in the line of exit. He claims that whatever good comes is due to the incidental drainage of the spinal fluid itself, and he therefore advocates that in relation to the intravenous treatment there should be extensive spinal fluid drainage. This opinion is not in accordance with the view held by other workers in this field; for example, Purves-Stewart and Wilson of England, as well as Solomon, Ayer, Ellis and others of America, believe that there is a direct beneficial effect from the introduction of anti-syphilitic medication into the cerebrospinal fluid spaces themselves. The reviewer is in accord with the latter view and believes that clinical experience is worth more than theory in a matter of such importance as the treatment of neurosyphilis.

Two new developments have occurred in the treatment of neurosyphilis. The use of malarial inoculations in the treatment of general paresis has been carried out in German hospitals and clinics for some years now. "At the height of the febrile attack in the donor (malarial attack) from 2-4 c.c. of blood are inoculated subcutaneously in the back of the parietic patient." The malarial attack thus induced in the patient is controlled by the use of quinin. The German reporters, Gerstman, Kirschbaum, Plaut, Steiner, Wagner-Jauregg (the originator of this method) all report remarkable results.

The use of trypanamid, an arsenical preparation made by the Rockefeller Institute under direction of Dr. L. Bearse, has been given favorable publicity. Both the malarial and the trypanamid treatment are too recent to be evaluated at the present time. In therapeutics many are called but few are finally chosen. This especially applies to therapeutics in neurology.

It may safely be said that the treatment of neurosyphilis at the present time involves the use of potassium iodide, mercury, but especially the use of arsphenamine. This should be given intravenously frequently, and with no set limit as to the number of doses. For the special cases which resist intravenous treatment, there should always be the resource of intraspinal, intracistern, and intraventricular treatment.

Situation in regard to epidemic encephalitis: Epidemic encephalitis still engrosses the attention and interest of neurology. The quest for the cause has not come to an expected conclu-

sion. At the present writing the organism of Loewe and Strauss seems to be the best authenticated organism. This was discussed in last year's review of neurology published in this journal. The organism is found in the nasopharyngeal washings and also from the brain filtrate. Rosenow sticks to a streptococcus as the cause of the disease. Which is correct or whether either is correct is a matter for time to settle.

The greatest interest rests around the lenticular syndrome which so characteristically follows in the wake of this disease. The lenticular syndrome is a group of symptoms characterized first by rigidity, especially of the neck, face, and limbs, and this impresses upon the individual a characteristic gait. In addition to the rigidity there is tremor, and this is of the type found in paralysis agitans, which is now known to be a form of lenticular disease. The lenticular syndrome may occur at any time following the acute symptoms up to two or three years, is progressive and at present beyond the reach of therapeutics. Various treatments have been tried to control this disastrous sequel,—sodium cacodylate in large and ascending doses, intravenous injections of hexamethylenamin, etc. In the reviewer's experience none of these has been of any avail in checking the course of this disease.

An interesting observation of Thalheimer and Updegraff is that there is an increase of sugar in the spinal fluid of cases of epidemic encephalitis. This is quite different from the situation found in meningitis and is therefore of some importance.

Brain tumor: In the review of neurology published last year, mention was made of ventriculography, a method of injecting the ventricles of the brain with air for the purposes of x-ray work and introduced by W. E. Dandy. Dandy still reports very favorably on the use of this method, and reports from other men confirm his opinion. Thus Weigeldt in Germany "has made 104 air injections in 65 cases by means of ventricular puncture. . . ." He states that the method never failed to indicate the side of the tumor. Local narrowing or widening of a ventricular horn often gave exact information. Even a very slight asymmetry of the ventricles indicates a pathological change. Bingel and Marburg also report favorably, but the latter states that the method should be used only when other diagnostic measures fail.

Cushing reports on the localized thickening of the skull produced by meningeal endothelioma. Of his 80 cases, 20 were accompanied by a recognizable thickening of the overlying bone. This was discovered by x-ray and is of considerable diagnostic and prognostic importance.

The situation in the neuroses: Schwab, who is one of those who believes in a modified Freudianism, believes that a neurosis "is never destructive to the individual, but has always the

nature of compromise, tending to save rather than destroy its possessor. It is an instinctive protective reaction of consciousness which arises out of the real or fancied need of an individual in response to his expected failure successfully to adapt himself to his environment. There is no anatomical foundation of an abnormal kind so far as the nervous system is concerned." Schwab further insists "that there is little need any longer to speak of a nervous heredity of the neurotic type as something inborn and beyond investigation. In most instances the child becomes nervous on account of surroundings, defective training and imitation, and as a result of all the foolish and unintelligent factors that are permitted to come into the life of an infant or young child." In relation to this it is interesting to note that in Boston there has been established the first attempt to meet the needs of the neuroses in the abnormal habits of the child. D. A. Thom of Boston has founded habit clinics as a part of the work of the commission of mental diseases. These clinics aim to co-operate with parents, social workers, school teachers, and the like in eradicating such abnormal habits as threaten the future mental health of the individual. While it is probably true, in the opinion of the reviewer, that too much importance can be ascribed to the transient habits of children and that they can be made introspective and self-critical by too much training and attention, these clinics, on the whole, represent a step forward in mental hygiene.

Freudianism does not seem quite so active as it has been in the past days, and its doctrines are gradually evolving away from those of its historic past. Further, and this is merely a personal opinion, however important Freudianism may be from the standpoint of theory and how much such theories may have contributed to our understanding of human nature and the neuroses, little is to be expected in a practical way from its application to the great problem of the psychoneuroses. This is entirely apart from the ability of Freudianism workers to cure a psychoneurosis, for even if they have a technique and an understanding which enables them to cure these conditions, there are not enough of them to even skim the surface of the situation. They cannot help in out-patient departments because the number of cases is too great and far too much time is required for the individual case to permit of a Freudian technique to be carried out. Furthermore, in private practice, there are few patients who have the means or the time necessary for treatment. It is only in the rare case of an individual having time enough, patience enough, money enough, that the psycho-analyst has a chance to show his capacities. There are probably not more than 50 trained psycho-analysts in America, and it would be an interesting problem in statistics

to compare their total working capacity with the energy necessary to treat the number of psychoneurotics in America.

Book Review

Pediatrics. By various authors, edited by ISAAC ABT, M.D., Professor of Diseases of Children, Northwestern University Medical School, Chicago; Attending Physician, Sarah Morris Hospital for Children of the Michael Reese Hospital, Chicago. Vol. I, with 284 illustrations. Philadelphia and London: W. B. Saunders Company, 1923.

This first volume of Abt's System of Pediatrics gives promise of an exceedingly valuable and comprehensive addition to medical literature when the set of eight volumes is completed. No extensive system of pediatrics has been published for thirty-three years, since the appearance of Keating's "Encyclopedia on Children" in 1889, and the field has long been fertile. The transitory value of medical literature is apparent, and after such a length of time it is natural that a re-summation of our knowledge, especially with the advances of recent years, should be necessary.

There will be much of permanent value in this new encyclopedia, and its very comprehensive scope will ensure it a long period of usefulness. The thoroughness with which the work is being prepared is exemplified in the first volume, which is really a collection of monographic essays. The History of Pediatrics is written by Fielding Garrison; Clarence C. Little has contributed a chapter on Congenital and Acquired Predisposition and Heredity; Richard E. Seamon has summarized the Anatomy of the Infant and Child; Growth and Development is discussed by T. Brailsford Robertson; John R. Murlin writes on Physiology of Metabolism in Infancy and Childhood, and Jesse F. McClenodon discusses the Application of Physical Chemistry to the Physiology of Childhood. The Hygiene of the Home and of Infants in General is considered by Walter Reese Ramsay, and of the School Age by Josephine E. Young; a chapter on Climatotherapy is contributed by Frederick L. Wakeham, and the Hygiene of Crippled Children by H. Winnett Orr. Dr. Abt has prepared the Introductory Essay on Encyclopedias Which Refer to the Diseases of Children.

The second volume has already been published and a review will appear shortly, and further volumes will be awaited with interest.

The suitcase is a poor ally of the criminal doctor.

Case Records
of the
Massachusetts General Hospital

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY

RICHARD C. CABOT, M.D., AND HUGH CABOT, M.D.

F. M. PAINTER, ASSISTANT EDITOR

CASE 9501

First entry. An American telephone lineman of twenty-four entered June 22.

F. H. His mother died of tuberculosis.

P. H. He had the usual children's diseases, and a septic (?) left foot in childhood with secondary infection about the knee, requiring incision and drainage four times with considerable evacuation of pus. Years ago when in the serv-

P. E. A well nourished young man with red face and neck, lying on his side in evident dyspnea. Lateral lobes of the thyroid gland enlarged. No bruit. A few cervical lymph nodes of the tonsillar chain enlarged. Chest signs as shown in Figure 1. In the left anterior axillary line about the fifth interspace was a pea-sized nodule. *Abdomen.* In the midline just above the umbilicus was a nodule the size of a small plum, apparently superficial. *Heart* normal except for distant sounds. Percussion measurements as shown in Figure 2. *Genitals.* Testes

1st sp.	6.5	4.5
2nd sp.	7.5	5.5
3rd sp.	To axilla	6.5

FIG. 2.

swollen, hard and tender. *Extremities, pupils and reflexes* showed nothing of importance.

T. normal until July 9, afterwards 97.8°-100.8°. P. 72-129. R. 15-29. *Urine.* Amount not recorded. Sp. gr. 1.016-1.032. Cloudy at one of four examinations, occasional leucocytes at the first, no albumin or sugar. *Blood.* Hgb.

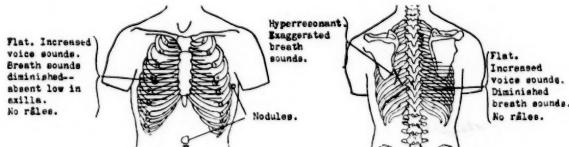


FIG. 1.

ice he had slight nycturia. A year ago he had malaria, apparently cured. He had fairly frequent sore throats, no real tonsillitis.

Habits. Good.

P. I. He was perfectly well except for a slight cough, occasionally productive, which he ascribed to cigarettes, until about May 15, when he began to notice dyspnea. This had steadily increased, and with it the cough had become more severe and more regularly productive of thick sputum, more in the morning and the evening, occasionally with black specks in it. For three weeks he had noticed a thyroid fullness. Two weeks ago he gave up work. The dyspnea was postural, worse when he lay on his back, considerably less when he lay on his side, and still less when he was upright. Lying on his back immediately caused cough, which continued until he changed his position. Two weeks before admission he noted a small superficial lump just above his umbilicus in the midline. He thought this had been increasing in size. For two weeks he had had considerable sweating.

85%, leucocytes 6,900-8,700, polynuclears 68%-77%, reds 7,688,000. *X-ray.* See Plate I.

Orders. July 2. Phenacetin gr. v. Atropin gr. 1/120 s.c., if there is marked dyspnea (not given). Triple bromides gr. xx. July 3. Aspirin gr. v. Phenacetin gr. x. July 9. Pantopon gr. 1/3 s.c. every three hours p.r.n. July 10. Triple bromides gr. xx. July 11 and 12. Pantopon gr. 1/3 s.c. every three hours p.r.n. July 14. Aspirin gr. x. Phenacetin gr. v.

June 23 a biopsy was done. Under novocain the nodule near the apex of the heart was removed. June 26 at a chest tap in the fifth space in the axilla and the sixth space below the angle of the scapula the needle met with great resistance and later sank through. No fluid was found. The tap seemed to cause the patient great distress and a sense of crushing pressure. He threatened to faint.

June 28 and 29 x-ray treatment was given. There was no reaction. July 2, however, about four hours after a treatment he had very severe

reaction, with nausea, headache, and intense dyspnea and malaise. He was near death until midnight, when he began to breathe more freely. Strichnin and atropin seemed to give him some relief. Next day he was more com-

breathe comfortably, eat well and sleep well. Then he noted on waking that one side of his face was swollen slightly, and he could not chew so well on that side. A few days later he realized the left side of his face was paralyzed.



PLATE I.—June 25. Dullness in the right base extending as high as the fourth rib and obscuring the outline of the heart and diaphragm. Left diaphragm low, indistinctly seen, regular in excursion. Mid shadow unusually large. No normal cardiac outline could be made out. The borders of the shadow were sharp and distinct, somewhat more pronounced to the left than to the right. The left border was wavy. The outline consisted of two prominences, one corresponding to the fourth rib in front, the other just above the diaphragm. No definite pulsation was made out in any part of these shadows, although in the left upper portion there was slight motion which might be actual pulsation or transmitted motion.

fortable, with no vomiting, although he still had intense headache and dyspnea. July 4 he was gaining, but still very weak, with intense pain through the sternum. July 9, 12, 14, 16 and 18 he had x-ray treatments, with very little reaction after the first and less and less after the others. July 20 he was discharged.

History of interval. For a week after leaving the hospital he felt very well and was able to

Difficulty in chewing, in moving the lips and in closing the eyes increased steadily. A week later he began to have some pain in the left jaw, not relieved by dental treatment of a carious tooth. August 9 he began to have headache and ear ache in the left ear. This progressed steadily. The headache involving at first only the left side of the head, later became frontal and occipital. At the same time he had violent nausea which persisted until August 17,

and after August 9 vomited almost everything eaten.

About August 9 there developed rather suddenly a scleral hemorrhage in the left eye, which increased somewhat. His eyes ached as part of his frontal headache. Since August 9 he had been in bed, though he came to the hospital for x-ray treatment August 18. At intervals during the month he had noted the development of small subcutaneous nodules, notably two in

Orbicularis oculi apparently paralyzed, more on the left than the right. Forehead wrinkled slightly on the right, not on the left. Eye movements apparently normal. A scleral hemorrhage involved the outer scleral wedge of the left eye. Near its center there seemed to be a pea-sized nodule, slightly elevated from the surface, slightly darker in color than the surrounding area. Slight motion of the muscles supplied by the facial nerve on the right side, none on the

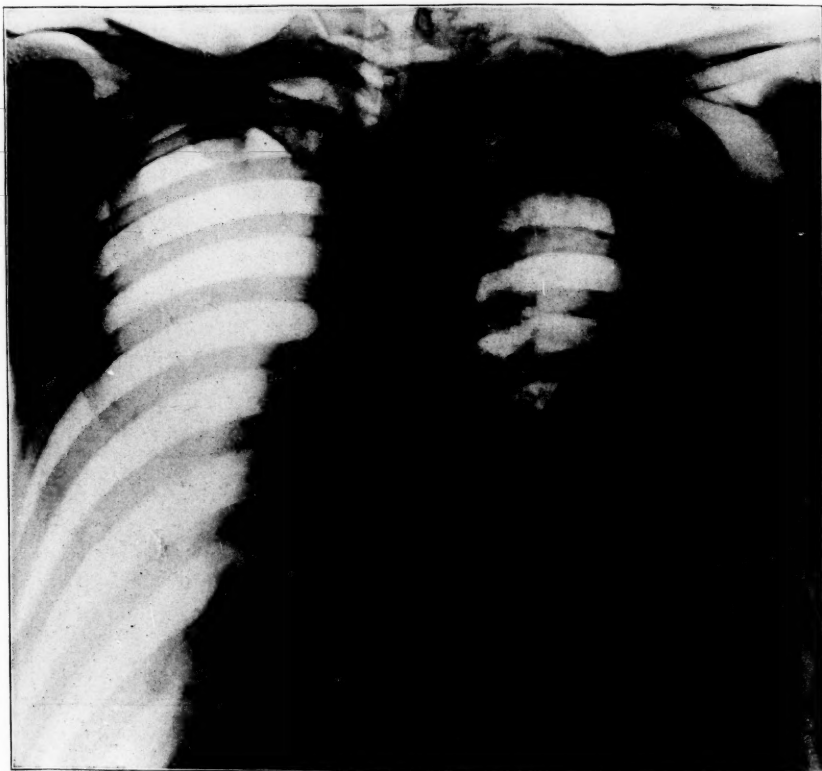


PLATE II.—July 18.

the right inguinal region and one just posterior to the right mastoid process. The one at the umbilicus had grown larger. His bowels had been rather constipated.

Second admission, August 19.

P. E. Somewhat more emaciated than at the previous admission. Face rather expressionless.

left side. Lips appeared somewhat thickened. Lip muscles and buccinators apparently paralyzed. Tongue protruded to the right without tremor. A few shot-sized palpable glands in the neck, axillae and groins. Behind the insertion of the right sternomastoid muscle a subcutaneous nodule about 2 by 3 cm., flat, not tender, apparently movable. Just above the umbilicus a similar nodule the size of a small crab

apple. In the right groin two nodules the size of lima beans. The overlying skin apparently adherent and discolored a reddish purple. Similar discolorations in the left groin without any palpable nodule. In the right axilla a soft mass about the size of an olive lying on the subscapular muscle. *Heart.* Point of maximum impulse in the fifth space 2 cm. outside the midclavicular line. Impulse forcible and slow. P_2 greater than A_2 . Sounds normal. No murmurs. *Chest* signs as shown in Figure 3. On the chest wall in the midclavicular line, about the eighth rib, was a slightly reddish area 1 cm. in diameter, markedly hyperesthetic. The character of the signs in the chest was much the same as at the previous admission, i.e. a sense of wooden hardness to percussion and complete absence of signs suggesting the presence of lungs. The liver was apparently enlarged or pushed downward, or both. Because of taut abdominal muscles the edge could not be felt, but the dullness seemed to extend well below the costal margin. *Abdomen.* The thorax overlying the right lobe of the liver seemed to be unduly prominent. The abdomen was held rather tense, with spasm (voluntary?). No organs felt. Some tenderness on deep palpation, especially in the right upper quadrant. *Genitals.* Both testicles enlarged to the size of hens' eggs, smooth, tender and very firm.

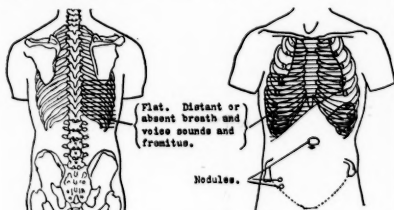


Fig. 3.

T. normal until August 28, then 96.7° - 100.2° until October 8; terminal rise to 103.9° by rectum. *P.* 49-90 until September 9, then 87-125, with a terminal rise to 150. *R.* not remarkable until October 9, then 17-40. *Urine*, 3 46-164. Sp. gr. 1.006-1.014. Cloudy at one of eight examinations, alkaline at four of nine, the slightest possible trace of albumin at one, leucocytes at four. *Renal function* September 19 10%, September 25 20%. *Blood.* August 20-September 4 hgb. 75%-85%, leucocytes 9,400-11,600, polynuclears 65%-71%. September 11-October 8 hgb. 80%-85%-35%, leucocytes 14,600-116,800. September 20 polynuclears 8%, lymphocytes 92%, nearly all small type. Reds slight achromia. One nucleated red. September 26 polynuclears 3%, lymphocytes 97%, practically all small forms. The few large lymphocytes all seemed by their structure to be adult forms. Reds normal except for slight

achromia. October 4 reds 4,720,000, October 8 3,040,000. *Stool.* Guaiac very strongly positive. *Wassermann* negative. *Lumbar punctures.* August 20, 12 c.c. of cloudy whitish fluid. Initial pressure 360 (patient vomited just previously), after 5 c.c. withdrawn, 290; after 10 c.c. withdrawn, 260. Pulse and respiratory oscillations normal. Jugular compression, slow rise for 60 mm. and slightly slower fall than usual, 1150 cells, lymphocytes and a few mononuclear arachnoid cells. About 250 red cells. No organisms. Ammonium sulphate positive. *Wassermann* negative. Gold solution 0^{10} . Total protein 250. Sugar 0.0454. August 21, 10 c.c. opalescent fluid. On standing a small filmy clot formed. Initial pressure 360 mm., after withdrawal of 5 c.c. 225; after withdrawal of 5 c.c. more 200. Jugular compression rose to 420 mm. rapidly and dropped slowly. Respiratory and pulse oscillations free. 550 cells, mostly lymphocytes and a few large mononuclears. No tb. found. Alcohol and ammonium sulphate positive. August 31, 10 c.c. of opalescent fluid. Hydrodynamics normal. Pressures 320, 220, 190 mm. 1154 cells, lymphocytes 88%, polynuclears 2%, large mononuclears 10%. Alcohol and ammonium sulphate strongly positive. A pellicle formed. In this one acid fast organism was found, which was however slightly thicker and longer than a typical tubercle bacillus. *Chest tap* August 27, ninth space, right posterior axillary line. 1500 c.c. bloody cloudy fluid. 9000 leucocytes, 20,000 red blood corpuscles. Smear 52% small mononuclears (lymphocytes?), 46% large mononuclears, some having pseudopod projections (artefact?), 2% polynuclears. No organisms. Culture, slight growth (Gram-positive bacilli?). *Sputum.* No tb. Many yeast sarcinae and mycelium. *X-rays* of the skull negative. Chest as shown in Plate III. *X-ray consultation* September 5. "Do not advise treatment for one month at least." *Dr. W. J. Mixer*—"Advise against operative interference."

Orders chiefly for morphia in 1/8 to 1/4 grain doses with or without atropin gr. 1/150. Occasional doses of aspirin gr. x to xv and veronal gr. x. Phenacetin gr. v August 24 and 26. Triple bromides gr. xxx September 9. Codeine gr. 1/4 September 12. Sodium bicarbonate gr. x September 13 for epigastric burning. Caffeine sodium benzoate gr. xx ordered but not given October 6 and cephalin locally to bleeding areas October 9.

August 20 definite tenderness over the left maxillary sinus was noted. August 23 there was no taste sense on the left anterior two-thirds. August 24 there were deep physiologic cups in both fundi, with questionable slight hemorrhage in the center of the left. The

vessels were prominent and seemingly projected toward the examiner in the right. The disc edges were slightly hazy but otherwise negative. August 25 an x-ray treatment was followed by bad reaction. August 28 the hemorrhage in the left eye was increased, and August 29 there was hemorrhage in the right eye. August 30 the facial paralysis on the right was clearing a little.

September 5 there was slight respiratory difficulty. Four days later this was less, as was also the headache, and the patient was brighter.

spleen was hard and palpable 4 cm. below the costal margin. September 21 the right foot was slightly swollen. September 25 there was marked swelling of the right leg with subcutaneous hemorrhages in the groins and over the abdomen. There was some pain. The conjunctival hemorrhages were absorbing. September 30 the scrotum was very swollen, the penis somewhat less so.

The patient went downhill rapidly from October 3. The right abdominal wall became swollen

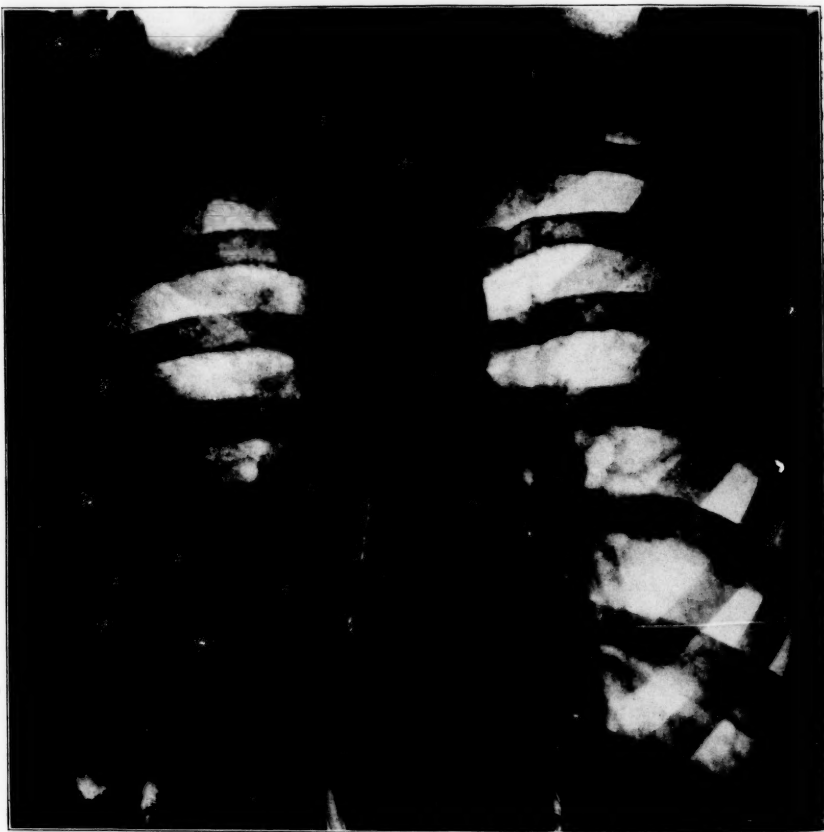


PLATE III.—September 7. Dullness in the right base, apparently due to a certain amount of fluid.

September 11 there was moderate pain in the left thigh. Next day the left leg was blue and cold up to above the knee. The dorsalis pedis was palpable and pulsating. The pain was severe. Next day the leg was slightly swollen. September 18 the leg was not so painful. The

as high as the axilla. October 8 there was apparently fluid in the abdomen. There was marked tenderness over the right abdomen. The wall was spastic and swollen. There were subcutaneous hemorrhages. October 11 the patient died.

DISCUSSION

BY DR. RICHARD C. CABOT

NOTES ON THE HISTORY

I should suppose the infection about the knee would have left him with a stiff knee, if the account is correct.

I do not see that we have anything in the past history that will throw any light on what is likely to come in the present illness.

Of course the "black specks" in sputa are nothing but the carbon of soot and smoke that he inhales, and have presumably done him no more harm than they do the rest of us who live in cities.

The suggestion from the present illness is certainly of a mediastinal mass with pressure on the respiratory tract. The results of a change of position strongly favor that. That this mass is the thyroid also seems somewhat probable, substernal goiter not being at all rare even at his age. Malignant disease of the thyroid or one of the other mediastinal structures, which is certainly suggested by the appearance of this lump in the epigastrium, does not seem so probable at his age. But if the whole thing is lymphoma and not thyroid at all (or possibly lymphoma starting in the thyroid), then at his age it is perfectly possible to have lymphoma, intestinal or peritoneal, which would account for the lump lower down.

NOTES ON THE PHYSICAL EXAMINATION

Apparently there are no râles and no bronchial breathing. The area of dullness given in the diagram looks like the heart, although it is a little higher up than we expect. In the right back there is the same combination of sounds as in front. What we get from all that is that there is something wrong on the right side,—that is about as much as I can say. If a bronchus were compressed by some mediastinal mass or by fluid in the right chest it might give us such signs. I could not say that a solid lung tumor would not give those signs. I think it very possibly would. Increased voice sounds have no right to go with fluid; but fluid has no right to go with anything else that is here. On the whole I feel as if that were more likely fluid than anything else.

DR. BOCK: What about tactile fremitus?

DR. CABOT: Dr. Bock's point is a good one, that tactile fremitus is one of the most useful differential signs between solid and fluid. We have no information about that. That is the sort of thing that happens unless we have a cast-iron rule for histories,—some one thing does get left out. It should be increased over solid, decreased over fluid.

I take it that their judgment was that this

nodule was in the abdominal wall. That is a very common place for little fatty tumors, sometimes epigastric herniae. The record says that this nodule just above the umbilicus was apparently superficial. That makes it likely to be an omental tumor or hernia, although it may be, of course, a subcutaneous metastasis.

The percussion measurements show an enormous extension to the right, an extension that we never see except in solid or cystic substernal tumors, never see with free fluid. It may be aneurism, but is more likely to be neoplasm.

The genital examination is passed over rather rapidly. That should be followed further. If we know as much as that we should know more. It sounds to me rather an offhand observation, not very carefully worked out.

There is nothing in the urine, it seems to me, to concern us.

The increase of red corpuscles in the blood must be accounted for by cyanosis, with perhaps the secondary polyglobulia that we see coming from extra marrow function in cases of chronic cyanosis. We must suppose that there was congestion of the head or of the point from which this blood was drawn, which was presumably the ear, as most of our blood examinations are taken from there.

DR. MERRILL, will you take the x-ray examination for us? I should say that this first plate looks the way a plate should look, so that anybody could see that that was something wrong.

DR. MERRILL: I wonder if the patient had been tapped before this x-ray picture was taken? (See Plate I.)

DR. CABOT: On the 26th I see a tap.

DR. MERRILL: I asked because while we have dullness in the right base which is very suggestive of the presence of fluid, the upper border has a suggestion of a horizontal line which makes us think of the level which is often seen after tapping. The entrance of air or the disturbance of the pressure gives more freedom to the fluid and shows this line.

DR. CABOT: That is the rule, I think, after tapping, and is a thing entirely discovered by x-ray. We had no idea of it until you began to point it out to us here.

DR. MERRILL: We see in addition to this dullness an unusually large shadow composed partly of the heart dullness and the aortic shadow, but so unusually large that there must be something else there. The left lower portion of the shadow which is suggestive as the heart apex is the only part we can identify as the heart. Above this we see an enormously large shadow in the transverse measurement, and it is obviously a mass of some kind which is of the same density as the heart shadow, blends with it, and obscures any differentiating outlines. The two things which it is necessary to differentiate are most commonly aneurism and mediastinal masses of a lymphoid nature. Other medias-

tinal tumors, of course, exist, but these are the most common. In our record it speaks of the absence of pulsation, which is not a reliable diagnostic finding because a tumor may have motion transmitted through the heart or great vessels, and there are some aneurisms which do not pulsate. This was seen to obscure the mediastinal space and has a wavy left border, a prominence here which I thought was the left ventricle of the heart, and a prominence above it which is absolutely abnormal, not the shape of a heart or aortic shadow.

DR. CABOT: How do you tell that this shadow on the right is not the shadow of the heart?

DR. MERRILL: There is no positive way except that as we are accustomed to view it this does not look like a normal shadow, and we see no pulsation. If that were the heart wall we should see a pulsation much more clearly than we saw it here. Of course we have those two things to think of, and although it is not an x-ray point, this is a young man in whom aneurism of this size would be very uncommon. In our opinion it is a mass which extends considerably to the left and less to the right, although considerably, but it is increased in its area of dullness by dullness in the right base, with this suggestive border, which makes us think of mediastinal tumor accompanied by fluid in the right base.

The second plate is of July 18, three weeks later. Can you tell me if x-ray treatment had been begun before this?

DR. CABOT: June 28 and 29 he was given x-ray treatment.

DR. MERRILL: This was after he had had a fairly good course of x-ray treatment. Of course in the treatment of this mass of probable lymphoid origin that is about the only course left. If we compare this with Plate I we can see that the mass has very much decreased in size, especially on the left side, where we now see almost a normal heart line. That could be determined by fluoroscope. On the other side, although the mass in the centre has diminished, the dullness in the base has increased, and he now has the rather characteristic oblique line of the presence of fluid.

In the third plate we have practically the same appearance. Although the heart shadow is more normal than before and the dullness of the base is somewhat less than it was the first time, still he has a considerable amount of dullness, apparently from fluid.

The fourth is a poorer plate, unfortunately aimed too high, and does not show the bases well. We can see an apparently normal heart line as far as we can see it, and a change in the transverse measurement of the supracardiac shadow, which now looks like a normal aorta. There is apparently some dullness in the base still. The disappearance of these large medias-

tinal tumors under radiation is almost miraculous.

DR. CABOT: I have never seen anything like that.

The orders were for pain and sleeplessness probably.

Of course they do not tell us what the biopsy showed. We do not know at all that this nodule was the same thing. It might have been a wen. So that even if we had a negative examination here it would not tell us anything about the other growth.

This aggravation of the patient's symptoms after tapping I think is a point worth stopping for. I have seen it a number of times with malignant disease of the chest. Contrast the relief that we get in cases of tuberculous or dropsical fluid. In malignant disease, whether we get fluid or not—equally when we do as when we do not—I have seen the pain worse and the patient feel worse.

DR. MERRILL: The first two treatments on June 28 and 29 were given with our old machine, of smaller penetration and voltage and a longer wave-length. On July 2 we began treatment with the shorter wave and higher voltage machine. We should have reason to expect more reaction after these treatments.

DR. CABOT: Is that about the way you would ordinarily give x-ray treatment in such cases, with this frequency?

DR. MERRILL: Yes. It is very common, especially in cases like this, to have much more reaction the first time. After that the treatments are given not on the same skin area, but given as frequently as the patient's condition will permit. I see by our records that treatments were given on those dates in varying number of areas. Naturally in a case like this the patient would be exposed anteriorly and posteriorly, supraclavicularly, etc. Beginning with one area the first time, he was given up to five areas sometimes at a sitting. The first one, as in a great many cases, gave him much more reaction.

DR. CABOT: This is certainly a brilliant therapeutic result, even if one has to acknowledge that it is temporary.

In the interval outside the hospital there was evidence of intracranial metastasis, which sounds first as if it involved the intracranial nerves, but later acts like any other brain tumor. There was an obvious spread of the tumors in their old situations and in new situations.

"The tongue was protruded to the right without tremor," showing apparently that the muscles on the left were stronger.

This examination answers in the negative my question about the heart's being possibly pushed over on the right side of the sternum.

Figure 3 looks more like the x-ray plate. We have the big mass in the region of the liver and apparently evidence of fluid at the right

base. It is much easier to make up signs after we have seen the x-ray plate.

Certainly we have nothing in the urine examination to suggest nephritis. It is more than probable that there were nodules of this kind in the kidney, and it is interesting to note whether they would influence the renal function. But I should not suppose the renal function is diminished by that. A man as sick as this can have 10 to 20% renal function without there being anything local to interfere with the local function.

DR. RICHARDSON: Was it done only once?

MISS PAINTER: It was done twice, on September 19 and 25.

DR. CABOT: I cannot argue from the renal function that there are nodules in the kidney.

The count of reds on October 8 (three million) shows a terrific rapidity in the drop which is hard to believe, but might be. The account of the blood shows that this tumor after being non-leukemic has begun to get into the blood as everywhere else, has gone over from a lymphoid hypertrophy into a true leukemia, which is a thing that has hardly ever been recognized in life. In going over the cases some years ago I found that only ten such had ever been seen. We often see cases which we suspect have been non-leukemic for a good while and then have become leukemic, but so far as I know it is a very rarely recognized transition, though spoken of in all text-books. I suppose the marrow is invaded before the end, because of the fall in the red count. Lymphoid tissue can grow in the marrow as well as anywhere else, and it seems as if that is what had happened.

Of course, with a leukemic blood the cell count in the spinal fluid does not mean so much as it otherwise would. The spinal fluid gets leukemic as well as the rest.

DR. BOCK: He was not leukemic at the time of the lumbar puncture.

DR. CABOT: If he was not leukemic at that time, we have to say he had a chronic meningitis.

I should like to know about the points of recognition of a "mononuclear arachnoid" cell. How do you distinguish it from any other large mononuclear, so-called?

DR. CANER: The protoplasm is very irregular, and it has pseudopods in all directions. It has a rather large nucleus.

DR. CABOT: I should not say that this proves that it had anything to do with the arachnoid. I have seen repeatedly in the circulating blood of endocarditis lenta an active phagocyte which we see moving around and eating up red and white corpuscles. So I do not see any reason for assuming that it had anything to do with the arachnoid in this case. It might have, but I do not see how we can be sure it had not come from the general circulation.

The sugar is in moderate amount.

One swallow does not make a summer, and one acid-fast organism does not make tuberculosis. That is not to say that it cannot be tuberculosis, but I do not think this is enough to show it.

The per cent. of mononuclears I do not think is particularly important as long as there is blood in the spinal fluid.

I suppose we have to consider that on September 11 there was venous thrombosis.

DIFFERENTIAL DIAGNOSIS

I do not see any sense in discussing the diagnosis. The root nature of this thing is certainly lymphoma with blood metastases, making it leukemia. It seems to start in the mediastinum, a common place for such things to start. We have no reason to doubt it. It may have started in the thymus. We perhaps shall never know. It has shown many metastases, the earliest perhaps this one in the epigastrium, which we may suppose was omental, though it may have been subcutaneous. Then one in the left axilla, then came those in the base of the brain, pressing on the cranial nerves. Then the spleen and liver began to show evidence of infiltration, then the bone marrow, and then the circulatory apparatus of the lower extremities, apparently not arterial but venous thrombosis, and as ascites developed we have every reason to suppose that the mesenteric glands are affected as well.

There is no particular interest, as I see it, in trying to add to the number of possible places in which this tumor appears. It is certainly a lymphoma. I should like to ask Dr. Merrill whether he thinks the patient's life was prolonged by treatment.

DR. MERRILL: He lived such a short time after he was taken sick it is hard to say, but I think that it probably was, a very short time, and not as much as many cases of probably less extent are prolonged.

DR. CABOT: Is there any reason to suppose the change from non-leukemic to leukemic blood has any relation to the x-ray treatment? It is rather the other way, isn't it?

DR. MERRILL: Our impression is that the leukemia would be decreased. But this apparently came up after the treatment was stopped.

DR. CABOT: Is there anything to add from the ante-mortem point of view to what the record has given us?

DR. AUB: You brought out the one point that struck us so forcibly, the original diagnosis of Hodgkin's disease swinging over to leukemia. Another was the remarkable central nervous system signs, the high white count in the spinal fluid, occurring over a month before any increase in the blood. Most of the neurological signs were peripheral.

DR. CABOT: You supposed, as I have, that there was definite meningitis there?

DR. AUB: Yes.

DR. CABOT: I do not see what else you can say, if the blood is not leukemic. You thought there was something near the ear?

DR. AUB: Yes, and that associated with the hemorrhage in the eye made us think that perhaps it was a hemorrhage, although we were very much puzzled by the high white count in the spinal fluid. A great many consultants agreed that they had never seen it before.

DR. CABOT: It was agreed, wasn't it, that there was something central?

DR. AUB: Probably infiltrating, which had broken loose to give the high cell count in the spinal fluid.

DR. CABOT: Not merely a peripheral condition—that is what I was getting at.

DR. AUB: No.

A PHYSICIAN: How do you explain the eye symptoms?

DR. CABOT: Hemorrhages are common in leukemia. This case had become leukemic by the time these occurred. Hemorrhage in any square centimeter of the body is common in leukemia,—in the ear, in the brain, in the eyes.

DR. MERRILL: He also had intestinal hemorrhage.

DR. CANER: Just before death he was extremely tender in the region of the liver. It was a question whether he had a portal thrombosis. We thought he had.

AN INTERNE: We have a case of Hodgkin's now who has very tender testicles. Is that very common?

DR. CABOT: I don't know. It is new to me. I don't remember seeing testicle symptoms. We ought to suppose in this case that there is infiltration of the testes by the same tumor.

DR. YOUNG: It is very much enlarged here. I think we should have to.

A PHYSICIAN: Isn't it true that once you tap you have to keep on tapping?

DR. CABOT: Yes.

A PHYSICIAN: He was not tapped very frequently.

DR. CABOT: No, but I guess he might have been, only they did not want to bother him.

A PHYSICIAN: Are those blood conditions all to be grouped under one cause?

DR. CABOT: Yes, we think of them all as tumors whether we see any tumors or not, whether the blood is leukemic or not. It is pretty well shown that they are not infectious, and I do not see why we should not group them with tumors. It seems to me that is the natural thing to do.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Malignant lymphoma.

Terminal leukemia (lymphatic).

DR. RICHARD C. CABOT'S DIAGNOSIS

Malignant lymphoma.

Lymphoid leukemia.

ANATOMICAL DIAGNOSIS

1. Primary fatal lesion

Malignant lymphoma involving kidneys, testes, pancreas, spleen, liver, retroperitoneal tissue, mediastinum, pleura and skin.

2. Secondary or terminal lesions

Hemorrhagic areas of endocardium, pericardium, peritoneum, skin and kidneys.

Thrombosis of inferior cava and the iliac system.

Edema of lower extremities.

Hydrothorax.

Slight hydropericardium.

Compression atelectasis of right lung.

Dilatation of the heart.

DR. RICHARDSON: In the outer corner of each conjunctiva there was a small hemorrhagic area. Opening the head we found a wet pia, the pial vessels rather empty. There were no macroscopic changes in the meninges, but microscopically there was some sparse infiltration of the pia with lymphoid cells.

DR. CABOT: Would you call that a meningitis?

DR. RICHARDSON: No, it is not an inflammation.

The brain weighed 1619 grams. We could make nothing out of it macroscopically. We took sections but found nothing in them. The pineal and pituitary glands were negative.

The bone marrow of the vertebrae was dark brownish red and had a little grayish opalescence in places. The marrow of the femur was dark red, a little bloody, and faded out in places into ordinary looking marrow. No definite tumor tissue was made out in the femur marrow or in the marrow of the vertebrae.

The skin of the trunk showed scattered over it small purplish areas, and there were numerous areas on the arms, legs, and back. The right lateral aspect of the thoracic wall bulged out to a considerable extent, more marked in the region of the lower half of the wall. This was not so on the left. The subcutaneous vessels on the right side in the region of the costal border and down to the crest of the ilium were rather prominent. The right lower extremity was somewhat swollen and pitted. The left thigh, ankle and leg were slightly swollen and pitted slightly. No glands were felt outwardly.

Just above the umbilicus the subcutaneous tissue showed a small area infiltrated with blood. Section from that showed infiltration with lymphoid cells.

The subcutaneous fat was in small amount. The muscles were rather wet. In the peritoneal cavity there was a small amount of thin bloody fluid. The peritoneum showed scattered over it

small hemorrhagic areas, the source of the blood in the fluid.

The stomach mucosa was flat and rather pale, but showed small hemorrhagic areas here and there. The intestines were negative, the mucosa pale. The retroperitoneal glands were enlarged up to three cm. This enlargement was well marked along the lesser omentum, in the region of the head of the pancreas, and down along the aorta, but dwindled out along the iliaes. Many of the glands showed a hemorrhagic character.

The liver was fourteen cm. below the costal border. The diaphragm on the right was at the sixth interspace, on the left at the fifth interspace. Of course that is down considerably on the right.

The right pleural cavity was full of thin clear brownish-tinged fluid, and we found 200 cm. of similar fluid on the left,—hydrothorax. The right lung was markedly collapsed, the left lung rather voluminous, blown up with air. The tissue of the right lung was dirty, pale brownish-red, spongy to leathery, and rather dry,—compression atelectasis. The other lung was spongy throughout and yielded considerable thin dirty reddish frothy fluid. There were no areas of consolidation on either side. The visceral pleura of the right lung was thickened to one mm. or more in places, and the parietal pleura was thickened rather generally up to one or more cm. This layer of thickened pleura lined the whole cavity, and was especially well marked over the diaphragm. Between the visceral and parietal pleurae in places massive columns of this dense tissue extended. This layer extended over the outer surface of the pericardium and in the situation of the thymus in the upper mediastinum presented there as a thick, fibrous, very dense layer in which the tracheal glands were embedded on each side. No evidence of the presence of thymic tissue was found. The bronchial glands were slightly to moderately enlarged and buried in the tissue that we have just mentioned,—a very unusual and striking picture.

The pericardium contained about 100 c.c. of thin reddish fluid with a few small hemorrhagic areas scattered over it, the source of the blood in the fluid. The heart weighed 264 grams. The myocardium was thin and flabby. The cavities were dilated. The valves were negative. The coronaries were free and negative. The aorta and great branches, the pulmonary artery and veins and the portal veins and radicles were all negative. The superior vena cava was negative, but the inferior showed the following condition: a little below the renal veins there were two small adhering thrombotic masses, and a short distance below them the upper end of a thrombotic column which extended down and blocked the entire iliac system on each side.

The liver weighed 2883 grams—considerable hypertrophy. The tissue was plump and dull

pinkish-brown, showing small irregular areas and streaks scattered through it, a picture like that of lymphoma in liver tissue.

The spleen weighed 600 grams—considerably enlarged. The tissue was plump, brownish-red, and in places there were indefinite pale streaks and areas.

The kidneys weighed 800 grams, equally distributed. The capsules came off well, but left lumpy surfaces, the small mounds of which showed as dark reddish masses infiltrated with blood. The section surfaces were homogeneous, pinkish-brown, and showed scattered hemorrhagic areas up to 2 cm. across. Microscopically the tumor tissue made up the greater part of the weight of these kidneys. Anatomically one would think that their functioning would be interfered with. The pelvis showed a few of the hemorrhagic areas, but were otherwise negative.

The tissue of the testes was a little leathery. The section surfaces were homogeneous, pale, and spotted with hemorrhagic areas.

DR. YOUNG: Were they very much enlarged?

DR. RICHARDSON: No, slightly enlarged.

DR. AUB: What did the pleura show microscopically—I mean the parietal pleura?

DR. RICHARDSON: Infiltrated with tumor tissue.

DR. CABOT: Have you any guess as to where it started?

DR. RICHARDSON: I guess the glands.

DR. CABOT: The mediastinal glands?

DR. RICHARDSON: That seems as favorable as any place.

DR. MERRILL: What did you see of the remains of the large central mass that was demonstrated?

DR. RICHARDSON: From the condition found at necropsy you must have knocked that into a cocked hat.

DR. MERRILL: There was nothing left of it?

DR. RICHARDSON: No. That is what astonished me in your pictures. They are certainly remarkable.

CASE 9502

An American poultryman of sixty-seven entered October 24 complaining of weakness and pain on moving the extremities. He was mentally somewhat confused, made irrelevant remarks, and was not entirely oriented as to time and place. The history is therefore not reliable.

F. H. His father and a brother died of cancer of the rectum, his mother of possible heart disease.

Habits. He was a heavy drinker, with sprees, until twenty-seven years ago, when he stopped using alcohol.

P. H. Negative.

P. I. For two years he had had piles. Recently these had been much more painful. In addition he had had about six boils on his buttock, back, legs and arm. He had been getting progressively weaker. He complained of sharp muscle pains in the arms and legs, aggravated by moving the limbs.

P. E. An undernourished old man with sunken face, incontinent of urine and feces and complaining of pain in the legs. Mouth open. Sordes on the lips. Breath foul but not ammoniacal. Tongue dry, red and furrowed. Skin dry. Several keratoses. Between the shoulder blades a sluggish punched-out ulcer with an irregular base and slight redness throughout the edge. A red indurated area on the left thigh like an indolent boil. Neck full over the left apex; no definite mass. Chest expansion fair. Lungs. Emphysematous breathing in both upper chests in front. A few coarse râles in both backs in the scapular region. No abnormalities of the heart noted except sounds of poor quality. Artery walls markedly palpable and tortuous. B. P. 125/65. Abdomen full, slightly tense. Liver dullness 4-6 cm. below the costal margin. Edge felt. Rectal examination negative but unsatisfactory. Genitals and pupils normal. Extremities. Moderate edema of the left ankle and leg. Reflexes. Knee-jerks not obtained. Questionable Kernig.

T. septic, 100.7°-103.8° by rectum. P. 90-108. R. 31-41. Amount of urine not recorded. Sp. gr. 1.020-1.022. A very slight trace to a slight trace of albumin at both of two examinations, a slight trace of sugar at the second, 1-3 leucocytes per high power field and numerous fine granular casts at both. Blood. Hgb. 65 per cent., leucocytes 8,800, polynuclears 81 per cent., reds 3,808,000, some achromia, no marked anisocytosis or poikilocytosis, platelets slightly increased. Wassermann negative.

Orders. Force fluids. Salt free low protein diet. Boric ointment to ulcer on back and left leg twice a day.

The patient lay in bed with his mouth open, responding to questions but at times quite irrational. He took fluids by mouth quite well. No explanation for the muscular pains was discovered.

At midnight October 25 he died.

DISCUSSION

BY DR. RICHARD C. CABOT

NOTES ON THE PHYSICAL EXAMINATION

"Emphysematous breathing" — probably, therefore, no emphysema will be found post-mortem.

It is very hard to tell about a Kernig in an old man of this kind. I do not think this means anything.

The patient was only here one day, so we do not really know much about his temperature.

DIFFERENTIAL DIAGNOSIS

These are very scanty data. I do not think anybody could reason out scientifically a diagnosis. We may guess right or we may not, but we have not enough to go on.

The things that come first to mind are (1) general sepsis connected with his boils and the bedsore between his scapulae. In an old man with diminished resistance it takes nothing more than an infected hangnail to carry him off with streptococcus septicemia. (2) The other thing to think of is chronic nephritis, probably arteriosclerotic in type, with anemia, and death from uremia.

We have no evidence of organic disease, it seems to me, in the internal organs except the suggestion of his swollen left leg, which I do not know quite what to make of unless it is connected with an internal thrombosis as part of his sepsis or independent of it. It ought to mean this unless he had varicose veins, and none are mentioned.

AN INTERNE: That was the leg on which he had had his boil.

DR. CABOT: There may be some connection between the boil and the swelling of the lower leg, but I should not be at all sure that there is. Of course he may have had a pneumonia. There is no evidence of it. I do not believe that is what killed him; it would be terminal. I think he is either septic or uremic. He seems to me more septic than uremic. There is no definite evidence of meningitis.

AN INTERNE: His non-protein nitrogen was taken and was but sixty-eight.

DR. CABOT: That is a little high, but not enough to influence us.

I vote against uremia and for a general septicemia connected probably with his bedsore and his boils. The commonest organism in such cases is the streptococcus.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Chronic nephritis.
Arteriosclerotic heart disease.

DR. RICHARD C. CABOT'S DIAGNOSIS

Septicemia.

ANATOMICAL DIAGNOSIS

1. Primary fatal lesions

Septicemia, streptococcus hemolyticus.

2. Secondary or terminal lesions

Evacuated subcutaneous phlegmon.
Phlegmon of the right thoracic wall.
Hypostatic pneumonia of the right lung.
Abscesses of the lung.
Edema of the left lung.
Fibrinous pleuritis.
Soft spleen.
Wet brain.

3. Historical landmarks

Obsolete tuberculosis of a bronchial lymphatic gland.
Slight chronic pleuritis, right.
Slight arteriosclerosis.

DR. RICHARDSON: There was edema of the pia. The vessels of Willis showed a slight amount of sclerosis. The brain tissue was wet, but otherwise was negative. The pineal and pituitary glands were negative.

On the left thigh was a phlegmon partially evacuated, and between the shoulder-blades another completely evacuated, with clean base.

Cutting into the thoracic wall we found between the right pectoralis major and the minor a large collection of thin purulent fluid which infiltrated the surrounding tissues as far up as the lower border of the axillary region.

The heart was negative. The amount of arteriosclerosis present was for him rather small. The kidneys were a little large, but showed no nephritis.

Culture from the heart blood showed streptococcus hemolyticus.

There were a few small abscesses of the lungs and some hypostatic pneumonia.

any food or liquid. The pain then subsided and was followed by tenderness in the right upper quadrant lasting a week. Five weeks ago she had a second attack similar to the first but more severe. The pain was relieved only by morphin. The vomiting persisted for five days. For the past month she had had sharp attacks of right upper quadrant pain every few days accompanied by vomiting and relieved only by morphia. She was confined to bed until two weeks ago, when she came to Boston for x-ray examination of the gastro-intestinal tract, which was negative, with a suggestion of gall-bladder pathology, but no positive evidence of stones. For the past two weeks she had had fever and chills. She was however slowly improving.

P. E. Slightly obese. Head, throat, heart and lungs negative. Abdomen. Tenderness, spasm and an indefinite mass in the right upper quadrant just below the costal margin. Liver edge not palpable. Possibly gall-bladder felt. Pelvic examination. Perineum fair. Uterus in fair position. Examination otherwise negative.

Before operation T. 99.1°-101.1°, P. 81-100, R. normal; amount of urine not recorded, sp. gr. 1.010, occasional red blood corpuscles and leucocytes; blood not recorded.

July 2 operation was done. The patient had a very smooth and comfortable convalescence until July 9, when she was slightly jaundiced. The stools were light colored. There was considerable discharge from the sinus. A small catheter was placed in it July 14. The wound continued to discharge a small amount of bile and the stools showed no bile until July 17. The jaundice cleared. July 18 she was discharged, to return if the symptoms recurred.

History of interval. After leaving the hospital she was nauseated and did not feel well. Three or four times a day, about an hour after meals, she vomited the food recently eaten. Until October 8 she ate well, but vomited so frequently that her strength was gone. She had lost thirty-seven pounds in four months. She had diarrhea, 3-5 stools a day, always clay colored. The wound healed in two weeks. Then she had needle-like pains starting in the back and radiating around the right side to the wound. Her stools were gray. A physician removed the scab, opened the wound and removed a stitch. For a week, until the probe hole healed, the wound discharged yellow pus. For the past week she had had continuous pain, somewhat relieved by a hot water bag. She did not sleep well, and often did not fall asleep until exhausted, at three or four o'clock in the morning. She had generalized itching of the skin, somewhat relieved by cornstarch baths and a wash.* Since her discharge she had been more jaundiced.

*Zinc oxid 3 ii, calamin 3 i, phenol 3 ss, lime water to make 3 viii.

CASE 9503

First entry. A Swedish housewife of thirty-four entered June 30.

F. H. Unimportant.

P. H. She had always been well until the present illness. She had had two miscarriages and six healthy children.

P. I. For ten years she had had "indigestion"—epigastric discomfort, especially after eating, pyrosis, much gas, and sour eructations. Seven weeks before admission she had for the first time an acute attack of pain in the right upper quadrant and vomiting. The pain at first was a dull ache; later it became acute and cramp-like, with radiation to the right shoulder. She vomited food eaten and later considerable faint greenish watery material. The pain persisted for three days. She was unable to retain

Second entry. October 11.

P. E. Skin and sclerae jaundiced. Evidence of recent loss of weight. *Abdomen.* Slight tenderness around the scar.

Before operation chart normal, *urine* and *blood* not recorded, *bleeding time* three and a half minutes, *clotting time* twelve minutes. *Duodenal intubation* failed on two attempts either because of reflex pylorospasm or very sluggish peristalsis.

Operation was done October 15. The patient made a poor ether recovery. That day transfusion of 500 c.c. of blood was done for shock and some hemorrhage. The patient rallied well, but next day was in very poor condition, still bleeding steadily from the wound and quite apneic and cyanotic. A second transfusion of 800 c.c. of blood was done. She rallied slightly, but in the afternoon was in as bad condition as before. The pulse was 128 and thready. Oozing continued. A third transfusion of 500 c.c. had little effect. She went steadily downhill. Hemoplastin given subcutaneously had no effect. 10 c.c. of 5 per cent. solution of calcium chloride in saline, given the day of operation and twice after the operation, also had no effect. October 17 the patient died.

DISCUSSION

BY DR. HUGH CABOT

This woman's complaints center about the upper abdomen, and there is nothing in her previous history to call attention to any other part of the body. She has the long history of "indigestion" which might be produced by a lesion of the stomach or of the gall-bladder. The developments within the last six weeks, however, show acute attacks much more suggestive of a lesion of the gall-bladder than of the stomach or duodenum. In fact some of her attacks are almost of the textbook type with radiation of pain to the right shoulder. The attacks have tended to become more prolonged and show a very suggestive residual tenderness after the pain has disappeared. The most recent development suggests that the attacks never entirely disappear, and the occurrence of fever and chills should draw attention to possible gross involvement of the liver in the infection.

Physical examination shows her to be of the type very likely to have gall-bladder disease, and the abdominal examination is entirely compatible. I note the suggestion that the gall-bladder may possibly be felt. Of course the actual feeling of the gall-bladder would raise the question whether or not there was disease of the head of the pancreas. On the other hand I have often been deceived in thinking that I felt the gall-bladder when in fact the mass was

a portion of the liver more or less pulled down by adhesions.

As far as the examination goes there is no clear evidence of obstruction of the common duct, and yet the occurrence of chills and fever, if in fact they did occur, should always bring to mind this possibility.

The gastrointestinal x-ray is probably sufficient to exclude any lesion of the stomach or duodenum which would produce symptoms extending over so long a period and culminating in this way. It would be necessary to assume a chronic ulcer and further to assume subacute perforation, a condition which would be unlikely to give a negative x-ray finding.

I think, therefore, we may safely assume that this woman has cholecystitis and cholelithiasis. The doubt in my mind is in regard to the condition of the common duct and the head of the pancreas. I should want to investigate both of these structures with considerable care and be pretty sure that they were free from abnormalities.

The indication for operation is perfectly clear, and on the face of it the probability of a successful outcome should be large.

DR. CABOT'S PRE-OPERATIVE DIAGNOSIS

Chronic cholecystitis.
Cholelithiasis.

PRE-OPERATIVE DIAGNOSIS JULY 2

Acute cholecystitis.

OPERATION

Gas-ether. Bevan incision 20 cm. long. The liver was found to be much enlarged, brownish-yellow and boggy in consistency. Exposure of the gall-bladder was difficult. The bladder was small, thick, and contained stones. There was one in the cystic duct. The common duct was well felt and no stones were made out. The pancreas was not enlarged. No peritoneal fluid was found. The cystic duct and artery were dissected out, clamped, and the bladder was then dissected from above downward. There was considerable bleeding, and the bladder was torn open at a spot where it had ulcerated into the substance of the liver. When it was removed, however, a fairly smooth surface was left. A drain was placed to the foramen of Winslow and the wound closed.

PATHOLOGICAL REPORT

A small fibrous gall-bladder, somewhat torn. Its surface is smooth, and it has a purplish-red mucous surface. There are two small stones.

A microscopic examination shows papillary hyperplasia of the mucous membrane. The walls

are thickened by fibrosis and infiltrated with small round cells and hemorrhage.

Chronic cholecystitis.
Cholelithiasis.

H. F. HARTWELL.

FURTHER DISCUSSION

It is a little disappointing to find so large a liver which could not be felt before operation. However, in these fat people such mistakes will be common.

The description of the liver shows that it has been considerably involved by some route. It is possible that the ulcer of the gall-bladder into the liver which is here described might have produced the whole condition, though I confess that it sounds more like that sort of liver produced by some obstruction of the common duct, particularly an incomplete obstruction. I am not sure that I should have been quite satisfied not to open the common duct and explore it more freely. The subsequent history with clay-colored stools means of course that there was some obstruction to the common duct. This obstruction might have been due to a stone, to inflammatory adhesions or to some injury to the common duct near the point where the cystic duct was tied off. Of these possibilities the first seems to me the most probable. The fact that her jaundice cleared up does not enable us to choose between these possibilities.

The history between the time of her discharge from the hospital and her return three months later strongly suggests that her common duct was never entirely free from obstruction. The stools continued to be more or less clay-colored. There was a good deal of vomiting, pain and loss of weight. She has apparently been jaundiced all the time since her discharge, though the discharge note to the effect that the jaundice cleared is somewhat puzzling.

At her second entrance in October she presents the picture of chronic common duct obstruction with some increase of clotting time and all the undesirable features which go with chronic jaundice.

Some operation must be done, though I do not envy the gentleman who has it to do. The field will be much obscured by adhesions, possibly by infection, and the identification of structures will be difficult. Moreover this is the type of case in which post-operative bleeding is most likely to occur. However, the risk, no matter what it may be, must be faced and the chances taken.

It has seemed to me that post-operative bleeding occurred somewhat less often if blood transfusions were done before operation. I think I should have done at least one transfusion in this case.

DR. CABOT'S PRE-OPERATIVE DIAGNOSIS

Obstructive jaundice.

DR. CABOT'S PRE-OPERATIVE DIAGNOSIS OCTOBER 15

Obstructive jaundice.

Partial stricture or stone in the common duct.

SECOND OPERATION

Gas-ether. Five inch right rectus muscle splitting incision. Incision made through the scar of previous operation and carried down to the peritoneal cavity, which was found to be full of adhesions in the gall-bladder region. It was entered with considerable difficulty just in the region of the suspensory ligament of the liver. Dissection both blunt and with the scissors freed the adhesions so that the region of the common duct was disclosed. The common duct was then determined and opened low. There was no escape of bile. An opening one cm. above this last incision allowed the escape of a considerable amount of bile. The double incisions in the common duct were then united and an area of stenosis was determined to lie between them. The lumen of the duct in this region was widened by Henheinecke-Miculicz suture. This was intended for the escape of bile from this region by way of the common duct to the duodenum. There was no drainage of the common duct. The wound was closed after a cigarette drain had been placed below what was supposed to be the stump of the cystic duct. There was considerable free bleeding from the adhesions which had been severed.

The patient stood the operation fairly well. There was a very evident abnormal tendency to bleeding, which could be checked however with extra care with ligatures.

FURTHER DISCUSSION

The findings at the second operation strongly suggest that some damage was done to the common duct at the previous operation, though it is possible that this represents only the result of post-operative adhesions.

I confess I am surprised at the decision not to drain the common duct, since the indication for drainage seems to me clear. It should, I think, have been possible to drain the common duct above the point of obstruction, perhaps also to pass a tube down into the duodenum. To maintain the calibre of the duct after the plastic operation has been done is important.

The subsequent history is typically that of a patient with chronic jaundice and consequent bleeding. There is considerable evidence to show that in these cases the bleeding is due to actual damage to the blood vessels, presumably due to the presence of bile in the blood over

so long a period. In cases where this is the case measures tending to increase the coagulability, whether by the introduction of calcium chloride or by transfusion, are likely to be without effect.

Necropsy should show the picture of a chronic jaundice. The liver should be enlarged, with considerable dilatation of the intrahepatic bile ducts. The findings in the common duct should be those of recent operation for stenosis. The spleen is likely to be enlarged. We have no evidence of any other pathological condition.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Cholecystitis.
Hepatic insufficiency.
Operations, cholecystectomy, freeing stricture of bile duct.
Three transfusions.

DR. HUGH CABOT'S DIAGNOSIS

Hemorrhage, intraperitoneal and elsewhere.
Enlarged liver with dilated bile-ducts.
Enlarged spleen.

ANATOMICAL DIAGNOSIS

1. *Primary fatal lesion*

Cholecystitis.

2. *Secondary or terminal lesions*

Icterus.

Extensive hemorrhage into the peritoneal cavity and retroperitoneal tissues.

DR. RICHARDSON: The examination in this case was restricted. A well developed and fairly well nourished white woman, thirty-six years of age. The conjunctivae showed a faint yellowish tinge. The skin generally was sallow, with a slight greenish-yellow tinge.

In the cubital spaces there were short sutured wounds, and in the anterior abdominal wall a linear operation wound 19 cm. long closed with sutures except in its middle portion, where a cigarette wick and a large mass of blood clot protruded. The stomach, pylorus and duodenum were negative.

The common bile duct and hepatic ducts were free. The gall-bladder was wanting, and in its region there were several sutures. In the situation there were several very large masses of blood clot, and blood and blood clot extended for some distances into the retroperitoneal tissues, reaching down along the right kidney as far as the lower end of the cecum. Above they also extended into the peritoneal cavity. There was all told at least 300 c.c. of fluid blood, and

the masses of blood clot weighed at least 1000 grams. The liver was of natural size and configuration and the tissue of fair consistence and bile stained. The pancreas and duct of Wirsung were negative. The spleen, kidneys, uterus, tubes and ovaries were negative. Further examination was restricted.

Anatomically the case is one of icterus with cholecystectomy and extensive hemorrhage into the peritoneal cavity and retroperitoneal tissues.

FURTHER DISCUSSION BY DR. CABOT

The restricted character of the post mortem examination adds nothing to our previous knowledge.

The finding of extensive bleeding into the peritoneal cavity is, of course, to be expected.

I am surprised at the description of the liver as of normal size and configuration, as I expected it to be somewhat enlarged. I continue to believe that if it had been possible to make sections of the liver dilatation of the ducts would have been found.

ERRATUM

In Case 9473, published November 22, 1923, Dr. Young is quoted as saying, "A quick suture of the common duct to the duodenum." The sentence should of course read, "A quick suture of the gall-bladder to the duodenum."

EXCERPT FROM THE MONTHLY BULLETIN OF THE MASSACHUSETTS SOCIETY FOR MENTAL HYGIENE

A SOCIAL SERVICE DEPARTMENT was opened by the Austin Riggs Foundation of Stockbridge on October 1 in conjunction with the free mental hygiene clinic at the House of Mercy Hospital in Pittsfield. This clinic has been conducted for over three years for Berkshire County residents, but it was decided that a psychiatric social worker was needed to further round out their treatment with close follow-up work.

This department was made possible by a gift of \$10,000 for a two-year program. Miss Lila Kline, a graduate of Smith College Training School, was employed to organize the work. An interesting development is a social service clinic held weekly in the out-patient department of Mercy Hospital. The Foundation plans to establish a similar clinic in Great Barrington in the near future.

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FRAUDULENT PRACTITIONERS AND THE PRESS

THE medical profession is concerned about certain facts and the reactions of the people following the publicity relating to these facts.

Reference is made to the disclosures of irregularities in connection with the issuance of fraudulent medical diplomas, the licensing of incompetent doctors, and deaths resulting from unskilled medical practice.

If the newspapers reflect the attitude of the people generally, great interest is being shown in the disclosures appearing in prominent spaces in the daily press. Conditions suspected by students of medical education are now shown to have existed, and the anticipated explosion has taken place. The cheap mercenary medical schools have been running true to form, and the sordid exploiters of ignorant youths have gone beyond the commonplace practice of acquiring money by false pretenses to the extent of engaging in the barter of false diplomas for large sums of money. Dishonest men have always found victims equally dishonest, and, as is usual in such combinations, temporary success has led to larger operations, with weakening of the structure, and with the falling of one prop the house of cards comes tumbling down and an outraged public demands justice.

Looking backward and beneath the surface it may be fairly claimed that the cause of this unhappy state of affairs lies to a large extent with the people. Honorable public-spirited physicians have labored for years with the representatives of the people to provide safeguards against these abuses. The responses have been inadequate and tardy.

Legislators have, it is true, enacted laws in many of our States which have had the effect of standardizing regular medical education and safeguarding the licensure of the graduates of recognized medical schools, but few States have, up to the present time, required of all practitioners of the healing art a decent degree of proficiency. Practically every law relating to the licensing of physicians has been a compromise, made necessary by the pleading of some low-grade school, sect, or cult. Even in those States where the legal standards of the regular medical schools are high, provisions are in force permitting imperfectly trained persons to deal with the ills of mankind.

Our public servants, in many departments, consult experts on mechanical and legal problems which are imposed on executives and commissions, and are usually governed by the information imparted, but on occasions where it should have been necessary to protect the people against disease and certain kinds of ignorance, the wholly unselfish voluntary advice submitted by experts in medical teaching and practice have often received indifferent consideration and, far worse, the influence of selfish individuals has had undue weight. Proponents of laws governing higher standards for physicians are not personally concerned in measures regulating medical education or practice, and only intrude their opinions and advice by reason of a sense of responsibility for those unable to decide these questions for themselves, and yet the use by opponents of the hackneyed term, "medical trust," and the allegation of a purpose to crowd smaller and weaker institutions to the wall have thrown a screen of prejudice and suspicion which has been effective to a large degree. The people should know that most of the high-grade medical schools do not accept all applicants for matriculation, for they have more applications than can be accommodated, and, therefore, the motives of the representatives of these institutions are purely altruistic.

The people are reaping the fruit of that which the objectors to better laws have sowed. They have our sympathy, and we trust that their chosen officials will meet the danger which is now all too apparent. The prosecuting officer in Connecticut suspects that there may have been many deaths other than those under investigation due to the work of improperly licensed doctors, and he proposes to ascertain the facts.

The spasm of virtuous indignation exhibited by the daily press is encouraging. We trust

that there is a real sympathy for the victims underlying the publication of the nauseating facts entirely free from a commercial estimate of the news value of the articles published.

Although our reputable Boards of Medical Registration have tried to perform their duties up to the requirements of the laws, the revelations of recent days impose greater responsibilities. We contend that no graduate from these discredited schools should be accepted for examination from now on, for the abundant evidence of fraud warrants the belief that diplomas or certificates issued by the officials of these institutions cannot be accepted as true statements of facts. If this position is untenable it should be so defined by the courts, and the Boards should throw the responsibility upon the applicants and the courts.

The time is ripe for again asking the people, through the legislatures, to decide whether the opportunities for fraud shall be taken from those who would gamble with the lives of the people.

No one knows when accident or acute illness may overtake a traveler away from home. He should not suffer the chance of having to accept the service of a man who entered medical practice through a back door, nor should the thoughtless or improvident person be subject to the wiles of the well-dressed fakir, even though he drives a high-priced automobile.

The business can be stopped by a very simple provision of law giving to the Boards of Registration the right to adopt an accredited list of medical colleges, and then only accepting applications from graduates of these colleges. Hitherto the people have played with fire and have been burned. Will they now throw prejudice aside and protect themselves?

May we expect assistance in continued agitation in the newspapers?

THE STATE BOARD AND E. R. A.

The investigation by the *Scientific American* of the electronic method of diagnosis has been slowed up by the cleverness of Dr. Abrams. A test conducted by the committee of investigators registered a failure for Dr. X, the electronic practitioner, whereupon Dr. Abrams stated that Dr. X was not an authorized exponent of E. R. A. This repudiation of Dr. X was followed by an invitation to the committee to visit Dr. Abrams' laboratory in San Francisco. We hope the committee will do this, for in our experience the master himself is far less convincing than some of his disciples. If the committee expects to be given an opportunity to carry on a scientifically controlled test with Dr. Abrams' cooperation, it will be disappointed.

An amusing and illuminating incident in this connection has recently occurred in Boston. One of the local practitioners of E. R. A., a man

whom Abrams has endorsed as a capable exponent of his theories, asked a local firm which manufactures radio apparatus to duplicate some of the "resistance boxes" used by him in making electronic diagnoses. The engineer under whose supervision this matter came made the boxes to correspond with the samples, except that he intentionally left the wires open so that the apparatus was quite inoperative. Curious as to what the outcome would be, he attended a session at which the electronic practitioner used the new apparatus with perfect satisfaction! The engineer, without the knowledge of the doctor, then disconnected a wire supposedly essential to the working of the apparatus. The diagnoses were still forthcoming, apparently as complete as ever. The attention of the doctor was called to these facts; he seemed much disturbed, and wondered if he could be at all influenced by his imagination. Yet despite the perfectly obvious fact that his diagnoses were entirely imaginative, he continued, and still continues, to practice this fraud upon a gullible public.

It is time for this farce to end. There is evidence enough at hand to justify the State Board of Registration in taking away the licenses of those who "practice medicine" by this means. The burden of proof is upon the followers of E. R. A.; if they wish to appeal from the action of the Board, and thresh out the question before the Supreme Court of the State, that is their privilege. The Department of Public Safety has, very properly, refused to grant a license to operate a hospital in which the electronic method would be the chief therapeutic measure employed. The Board of Registration should show equal courage and wisdom, and for the sake of the public whose interests they are appointed to guard, should take away the license to practice medicine from those who admittedly practice according to electronic methods.

HEALTH EXAMINATIONS

A ROUND table conference of about twenty physicians was held at the Boston Medical Library on November 27 at the invitation of Dr. E. H. Bigelow, President of the Massachusetts Medical Society, to discuss the matter of health examinations.

The discussion was free and informal and many suggestions of value were offered.

There was a general consensus of opinion that the medical profession should recognize the growing demand on the part of the public for routine health examinations. They should recognize their value and arrange for adequate methods of examination and advice. A definite hour should be set aside for any examination, in the same way as an hour is set aside for a minor surgical operation, and a fee should be charged commensurate with the services rendered and the time consumed.

The examinations should be made by the family physician as far as this is possible, but it was pointed out that in some communities the bulk of this work might perhaps in time drift into the hands of men who were particularly interested in this special branch of medicine. It was pointed out that the examination should be made by one individual, who might call in specialists for aid along certain lines. Satisfactory results are not to be attained by the combined reports from specialists.

The possibility of special clinics in hospitals, particularly in the smaller cities, was suggested.

The objections to physical examination by employees of large corporations, on the suspicion that there may be ulterior motives on the part of the employers, has been to a great extent overcome where a portion of the expense and of the direction of the policy is borne by the employees.

There was a general feeling against any attempt to hasten the demand on the part of the public for health examinations, because propaganda would give unjustified hopes of the results to be attained. The public today is becoming educated to what can be done for school children, and they are growing up to demand health examinations in later life.

It was felt that the medical profession should prepare some general plans to govern the type of examinations to be made in order to attain the best results.

Children require one form of examination. Adults require another. The age, the sex, and the habits of life of the individual must govern largely the methods and details of the examination. The bulk of the health examinations will be made not in the absolutely healthy nor in those definitely diseased, but in the great class of those who have disturbances of function. It is essential that the examination of individuals must meet the needs of this large number, who often show no evidence of organic disease.

At the conclusion of the meeting Dr. Bigelow was requested to appoint a committee to suggest some routine forms for the physical examination and to make any other suggestions regarding health examinations which seems wise,—possibly in the form of a syllabus. It was suggested that this committee publish its conclusions in the *BOSTON MEDICAL AND SURGICAL JOURNAL*, if possible before the next meeting of the Council of the Massachusetts Medical Society in order that, if deemed wise, action upon the committee's report might be taken at that meeting.

WHAT IS A SERUM?

THE terminology of medicine deserves its place among the many tongues of Babel's tower. Others than those more or less accustomed to its use have their right to be confused by it. It

occasionally seems to us, however, that there is an unnecessary looseness of thought in the use of the more common terms, and particularly among the contributors to the lay press. The common and not especially medical term of "serum" is the burr under the saddle at present. It is apparently useless now to protest against the use of "serum" as a misnomer of "vaccine," but a despairing gasp is elicited when we read of scopolamin, the "truth serum."

We feel that the journalist should really know what a serum is. We feel that the average writer of today must have had an elementary training in physiology or know someone who has had, or at least have access to a dictionary. We trust that when we write on carpentry we will not call a screw a nail or a plank a shingle; when we discuss the housepainter's art we shall try not to confuse his paints and varnishes, and in a dissertation on plumbing we shall attempt to differentiate between the pipes and the water that rushes through them.

A MEMORIAL TO DR. E. E. SOUTHARD

DR. WILLIAM HEALY of the Judge Baker Foundation is sending to the friends of Dr. Southard a simple folder in which the suggestion is made that the friends of this distinguished physician might wish to contribute to a fund to be used in providing their expression of appreciation of the great work performed by a pioneer in psychiatry.

The suggestion is in the following words:

The memorial should be intimate, personal, we have thought—best, a bronze portrait relief of good size. The trustees of the Boston Psychopathic Hospital have authorized me as chairman to commission the work and to receive contributions therefor.

After various delays the relief is in progress, being undertaken by the sculptress, Bashka Paëff, who has done such beautiful work of this kind.

The sum of a little more than a thousand dollars will cover the cost.

The opinion has been expressed that many besides medical colleagues will feel it a privilege to contribute—psychologists, social workers, university colleagues, laymen who have profited by his work and friendship. It will be a finer memorial if many join in it. All are offered the opportunity of contributing.

For the sake of carrying the memorial to completion without longer delay, will you not please reply directly to this announcement.

Please make checks payable to me as treasurer and address me:

DR. WILLIAM HEALY,
40 Court Street,
Boston, Mass.

A bronze medal, duplicating the portrait, of a

size suitable for desk or table, can be struck off for those who desire it at the price of \$5 each if fifty orders are received, or at \$10 each if twenty-five orders are received. Those who desire such a medal will kindly send \$5, in addition to the subscription to the memorial, and if there are not enough orders the fact will be made known and the money returned.

There are many other persons, who did not enjoy personal contact with Dr. Southard, who appreciate the quality of service rendered by him and yet may be glad of this opportunity to contribute to this worthy project.

Miscellany

MASSACHUSETTS ASSOCIATION OF ASSISTANT PHYSICIANS

THE sixty-second meeting of the Massachusetts Association of Assistant Physicians was held at the Foxboro State Hospital on Friday, November 23, 1923, sixty-three members and ladies being the guests of Dr. Albert C. Thomas, Superintendent.

On arrival groups were taken through the hospital and given an opportunity of seeing the many unusual features of this institution. The new construction recently completed, particularly the hospital section and congregate dining-room and kitchen, were very interesting to the visitors. The excellent dinner at 1.30 p.m. amid charming seasonal decorations were greatly enjoyed. At 2.30 p.m. the meeting was called to order by the President, Dr. Arthur E. Pattrell, followed by a short business session during which the officers for the ensuing year were elected as follows: President, Dr. R. B. Dexter, Taunton State Hospital; Vice-President, Dr. N. A. Dayton, Wrentham State School; Secretary, Dr. W. Overholser, Medfield State Hospital.

A paper entitled "General Paralysis of the Insane" was then read by Dr. Louis B. Hill of the Foxboro State Hospital staff. In this a general review of the literature of the subject was presented. Only the points of recent interest will be abstracted. Dr. Hill considers that a new impetus was given the treatment of the disorder by Swift-Ellis in 1912 when they advised the use of their technique. In 1916 Dercum made a distinct advance in advocating spinal drainage followed by intravenous arsphenamine.

The use of malarial infections as treatment has been most extensively and successfully perfected in South America. It has been found that triparisimide has its main effect on the formula of spinal fluid, but is of no great importance otherwise. In considering the treatment, Solomon has abandoned lumbar puncture for cistern and ventricular puncture, and feels that this method of direct treatment increases

the life expectancy of paretics. Mills and Vaux in a recent treatise on paresis state that paretics should not be treated, as such treatment only lengthens lives without increasing the efficiency of the patient sufficiently for discharge.

At Foxboro, Dr. Hill has been using the Swift-Ellis technique and has completed his observation in about thirty cases. The results have varied considerably. One group of the patients has shown improvement, while others have not done as well under the treatment, and have improved decidedly when treatment has been stopped. However, the marked improvement in several cases leads Dr. Hill to conclude that it is doubtlessly advisable to continue treatment of paretics.

A vote of thanks was extended to Dr. Thomas and his staff for the royal welcome and excellent entertainment provided for the members of the Association. Meeting adjourned.

NEIL A. DAYTON, M.D.,
Secretary pro-tem.

Wrentham State School.

ANNUAL REPORT OF THE BOSTON PSYCHOPATHIC HOSPITAL

IN the report for the year ending November, 1922, the Director, Dr. C. Macfie Campbell, reviews the chief events of the preceding year and presents some of the problems now up for study, as well as the improvements needed to help carry on the work. Dr. Karl M. Bowman, previously assistant at Bloomingdale Hospital, was appointed Chief Medical Officer. Miss Fallon, Superintendent of Nurses, resigned in July, 1922, to become Superintendent of Nursing at the Long Island Hospital, Boston.

The hospital has continued to be a center of medical education, both undergraduate and graduate. In research work, especial attention has been paid to careful clinical study. "In psychiatric research at the present moment there are two main trends which are supplementary to each other. The one trend is in the direction of a profound and searching investigation of the original constitution, of traits of character, of habitual modes of reaction, of the special nature of environmental complications. This line of investigation aims at a thorough analysis of the functional problems of the adjustment of the individual to the environment without any premature hypothetical translation of the actually observed facts into a scheme which may be couched now in neurological, now in endocrinological and again in biochemical terms. . . . The other line of investigation aims at analyzing some of the fundamental mechanisms which form a part in the total functioning of the individual. Investigations along this line aim at determining the exact rôle played in the more complex functions by the component organs and systems of the body, and at

tracing the exact behavior of these individual systems or mechanisms in conditions of abnormal mental life."

Special attention has been paid to the organization and conduct of the Out-Patient Department. In the work of both the Out-Patient Department and the House, the Department of Social Service has rendered active and valuable assistance.

The report of the Chief Medical Officer reviews the work of the year from the medical standpoint. Dr. Bowman notes the habitually low basal metabolism of mental disease, and refers to the efforts of the staff to increase this by glandular feeding. Although he feels that their experience is not conclusive, he states that the results of endocrine feeding have been largely negative.

In the Out-Patient Department, a number of changes in the personnel of the medical staff have occurred. Dr. Percy L. Dodge resigned on January 31. Dr. Marianna Taylor, who succeeded him, left on April 1 to take a position as medical officer on the resident staff of the Hospital. Dr. Douglas A. Thom, for two years chief of the department, resigned on October 1, and was succeeded by Dr. Martin W. Peck, who had been his assistant for the previous six months.

In the Department of Therapeutic Research, Dr. H. C. Solomon has done notable work with neurosyphilis through study of the spinal fluid.

ESSEX NORTH DISTRICT MEDICAL SOCIETY

The Superintendent of the Essex Sanatorium (Tuberculosis), Olin M. Pettingill, M.D., Middleton, Mass., invited the members of this Society, and Essex South, to attend a conference on Friday evening, December 7. The program was as follows:

4 P.M. Demonstration Clinic by Hospital Staff. At this clinic the physical signs and roentgenogram mutations found in various types of tuberculous lesions of the lungs were shown, the patients examined and progress of the disease explained.

5 P.M. Six-reel motion picture showing physical examination of the chest.

6.30. Buffet lunch.

7.30. Evening Session. Edward O. Otis, M.D., of Boston, presiding.

1. Address, "Chronic Respiratory Diseases," by John B. Hawes, 2nd, M.D., of Boston. Chief discussants, R. E. Stone, M.D., of Beverly, and G. E. Tucker, M.D., of Salem.

2. Illustrated lecture by Dr. R. Plato Schwartz of the J. N. Adam Memorial Hospital, Perysburg, N. Y., upon "The Treatment of Non-pulmonary Tuberculosis." Chief discussants, P. P. Johnson, M.D., of Beverly; S. Chase

Tucker, M.D., of Peabody, and Walter G. Phippen, M.D., of Salem.

THURBER MEDICAL ASSOCIATION

The second bi-monthly meeting of the Association was held at the Nurses' Home in Milford, Mass., on Thursday afternoon, December 6, at 3 o'clock.

After a brief business session, the topic, "The Shortage of Doctors in the Rural Districts, and What to Do about It," was considered.

The meeting was in charge of Dr. J. M. French, who outlined the subject, asked some questions, and kept up the interest.

Dr. E. H. Bigelow of Framingham, President of the Massachusetts Medical Society, gave the Association the benefit of his observations and experience concerning the subject.

Mr. W. H. Brock of Athol, publisher of *The Healthy Home*, told how the matter looks to him, from a layman's point of view.

After this the subject was open for discussion. This was an open meeting, and all persons interested in the public health, and the place of the family physician in the rural communities, were cordially invited to attend.

THE NEW YORK ACADEMY OF MEDICINE

SECTION OF MEDICINE

THURSDAY evening, December 6, at 8.30 o'clock, a stated meeting of the Academy of Medicine was held, with the following program by members of the medical staff of the Collis P. Huntington Memorial Hospital of Harvard University:

1. Papers:

(a) Certain Aspects of Leukemia.

George R. Minot.

(b) (1) Blood Platelets in Leukemia.

(2) Leukemoid Condition in Children.

Thomas E. Buckman.

(c) Some Newer Aspects of the Behavior of the Blood after Hemorrhage and Transfusion, and Their Relation to Leukemia.

Raphael Isaacs.

2. After the stated meeting of the Academy, there was an executive session of the Section on Medicine for the election of officers for the year 1924.

WORCESTER DISTRICT MEDICAL SOCIETY

The regular meeting was held Wednesday, December 12, at 5.45 p.m., at the Boston Store Restaurant. Following the business meeting, lunch was served.

PROGRAM, 7 P.M.

1. A Discussion of Acute and Chronic Pancreatitis. Dr. Fred B. Lund, Boston.

2. The Relation between Pancreatitis and Gallstones. Dr. M. F. Fallon, Worcester.
3. Some Clinical Aspects of Pancreatitis. Dr. Walter C. Seelye, Worcester.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY

HOSPITAL DAY

A meeting of the Middlesex South District Medical Society was held on Wednesday, December 12, 1923, at the Cambridge Hospital, 330 Mount Auburn Street, Cambridge, Mass. It took the form of a Hospital Day and was conducted as follows:

Surgical Clinic: Operations, case demonstrations, and discussion by the Surgical Staff.

Medical Clinic: Case demonstrations, and discussion by the Medical Staff.

Neurological Clinic: Case demonstrations, and discussion, by Dr. F. B. M. Cady.

Nose and Throat Clinic: Operations, case demonstrations, and discussions, by Drs. N. S. Bacon and E. J. Butler.

The clinics began at 10 a.m.

Luncheon was served at 1 p.m.

Obituary

CORNELIUS JOSEPH McCORMICK, M.D.

DR. CORNELIUS J. McCORMICK, a well-known and well-beloved physician of Waltham, one who was devoted to the public service, died suddenly of heart disease at his home in that city December 4, 1923, at the age of seventy.

He was born in Milford May 9, 1853. He was graduated from the Harvard Medical School in 1876, and established himself in Waltham, where he had been in constant practice for forty-five years. He served as a member of the school committees under the old town form of government; was one of the founders of the Waltham Hospital, and for several years had been president of the hospital corporation and a member of the staff. For many years he had been a trustee and lecturer at the Waltham Training School for Nurses. In addition he was a director of the Waltham Savings Bank and a trustee of the Waltham Public Library.

He was a member of the Massachusetts Medical Society; one of the organizers and a member of the Waltham Medical Society, and a member of the American Medical Association. He was medical examiner of Waltham Council, K. of C., and of Waltham Court, M.C.O.F.

He was married three times and is survived by a widow, who was Miss Claire Connolly of New York; by a son, Capt. Arthur J. McCor-

mick, dental corps, U. S. A., now stationed at Fort Niagara, N. Y.; and by two daughters.

RECENT DEATHS

DR. CORNELIUS JOSEPH DACEY of Brockton died at Boston of tuberculosis, October 3, 1923, at the age of forty-four.

He was a graduate of Tufts College Medical School in 1901 and had practiced internal medicine at Brockton since joining the Massachusetts Medical Society in 1905. He held membership in the American Medical Association.

DR. HENRY ALBERT SUTOR, a Fellow of the Massachusetts Medical Society, died at his home in South Deerfield, December 2, 1923, at the age of 44. He was a graduate of Tufts College Medical School in 1906. While a student he was on the varsity baseball team, of which he was captain in his senior year. He was born at Fairlee, Vt., on Sept. 17, 1879. After being admitted to practice his profession, he went to West Burke, Vt., where he practised for four years. In 1910 he returned to Massachusetts and engaged in practice in South Deerfield, where he had since been. In 1907 he married Sadie E. Gilman at Waterville, Quebec, who, with their two sons, Douglas and John, survive him. He was a 32d degree Mason and was past master of Mount Sugarloaf Lodge, A. F. A. M., South Deerfield.

News Items

BEVERLY HOSPITAL.—The regular monthly staff meeting was held at the Beverly Hospital, Tuesday, December 4, at 4 p.m.

DR. ALBERT E. SMALL has been elected to the office of Vice-President of the Middlesex East Medical Society to fill the vacancy caused by the death of Dr. Ralph Putnam.

REMOVAL.—Dr. Albert Marsh, associated with the Channing Sanitarium for the past five years, has returned to Southboro, Mass., and will receive patients at Hill Crest.

WEEK'S DEATH RATE IN BOSTON.—During the week ending December 1, 1923, the number of deaths reported was 183, against 209 last year, with a rate of 12.35. There were 31 deaths under one year of age, against 34 last year. The number of cases of principal reportable diseases were: Diphtheria, 52; scarlet fever, 84; measles, 46; whooping cough, 5; tuberculosis, 16. Included in the above, were the following cases of non-residents: Diphtheria, 9; scarlet fever, 7; measles, 1. Total deaths from these diseases were: Diphtheria, 5; tuberculosis, 9. Included in the above was the following case of a non-resident: Diphtheria, 1.

APPOINTMENT OF DR. S. JOSEPHINE BAKER.—Dr. S. Josephine Baker, of New York, has been appointed as Consulting Director in Maternity and Infancy and Child Hygiene of the Children's Bureau of the U. S. Department of Labor.

Dr. Baker is known as one of the foremost authorities in the nation in the field of child health. Her resignation last spring from the position of Director of the Bureau of Child Hygiene of the New York City Department of Health, came after twenty years of pioneer work for the welfare of the mothers and babies of New York, during which the infant mortality rate in New York was reduced from 144 per thousand live births to 75, a little more than half the former rate.

Dr. Baker organized the Child Hygiene Division of the New York City Health Department in 1908. At that time it was the first bureau of its kind to be established in the United States, and it also antedated the Children's Bureau. Since then nearly every State has established such a bureau or division.

Dr. Baker's work, through the Children's Bureau, for the mothers and babies of the nation, will lie chiefly in advice in the determination of policies and the planning of work, and in the writing of reports.

Correspondence

THE HARVARD MEDICAL SCHOOL DORMITORY AND POSTGRADUATE STUDY

DR. CHRISTIAN'S LETTER TO THE CHAIRMAN OF THE COMMITTEE

Dear Dr. Joslin:

A useful function for the proposed new Dormitory of the Harvard Medical School would be its service in postgraduate education in medicine; particularly in the summer months will it reach its maximum of efficiency in this respect, for in it can live in the summer a large percentage of graduates taking summer courses. Throughout the year, however, a few graduates can live there, and all can get their meals in the Dormitory dining-room.

In an informal way at meal times, naturally, there will be discussions of the day's work, and men taking different courses profitably can exchange ideas. Here there will be no need for the notice that greets the eye in the Rochester, Minnesota, hotel as one enters the dining-room: "Guests are requested not to discuss operations in the dining-room," for here all will be medical men. Much more worth while perhaps can be the evening hours if they are properly organized, for then each graduate can in turn report on cases of particular interest that he has seen in the clinics or describe some new method of diagnosis shown him in the laboratories, and a discussion of these will be the natural outcome. A Graduate Club to meet in the Dormitory can be organized, composed of all graduates registered in the School, presided over by the one longest in attendance. The roster of such a club in a few years will become an interesting list of signatures. In such a club organization regular assignment of men to report on this, that or the other can be made. Discussion leaders can be picked out for each evening. From time to time faculty members and others can be invited to come and discuss topics, and in various ways instructive meetings can be planned.

Some years ago, when a visitor at the Mayo Clinic in Rochester, I found just such a Graduate Club in existence, and at that time it constituted a very im-

portant factor in the surgical education that visitors in the Mayo Clinic were receiving.

For men living in or boarding in a dormitory many useful contacts with each other are formed and there is no waste of time in getting to a meeting place when the meeting is in the building. Then think of how much the newcomer in the Graduate School will get from asking questions of the one who, by experience, has learned the ways of getting most medically out of a period of stay in Boston! The new Dormitory can and will be a great asset to every graduate student at the Harvard Medical School from the day it is opened.

HENRY A. CHRISTIAN.

DR. CABOT DISCLAIMS STATEMENTS ATTRIBUTED TO HIM

November 30, 1923.

Mr. Editor:

I am glad that you have given me the opportunity to correct the very misleading and inaccurate report of my remarks to the Congregational ministers on November 20th.

I did say that *some* physicians look on religion as a mild type of insanity, but not, of course, that all physicians so regard it. I did not use any phrase about people's "worshipping doctors for doing what ministers could do better," but did say that in almshouses, where old people are congregated, in hospitals and insane asylums, ministers could helpfully supplement what doctors do. As to our uncertainties in diagnosis and helplessness in therapeutics, I spoke of this, of course, not as a general or universal condition, but as applicable to many cases in the institutions for chronic diseases just referred to.

I should not have made the talk at all if I had thought that there was any chance of this sort of scandal-mongering and sensation-cherishing reporter would be present.

Yours sincerely,

RICHARD C. CABOT.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

RADIO BROADCASTING STATION

New York, December 1, 1923.

Mr. Editor:

We should like to call your attention to page 792 of the BOSTON MEDICAL AND SURGICAL JOURNAL, issue of November 15, 1923, to the article entitled, "Instruction by Radio," in which article you state that The American Society for the Control of Cancer gave a talk, "Are You an Ostrich," over the station of the New York Telephone Company. This talk, which was sponsored by the New York Tuberculosis Society, was put on over Station WEAF of the American Telephone and Telegraph Company. For your information, we might say that the New York Telephone Company does not operate a broadcasting station.

Thanking you for your courtesies in this matter, I remain,

Very truly yours,

J. A. HOLMAN.

Manager of Broadcasting.

NOTICES

CHILDREN'S HOSPITAL STAFF CLINIC

The first meeting will be held in the Amphitheatre on Friday afternoon, December 14, at 4.30 o'clock. All physicians are cordially invited.

SUFFOLK DISTRICT MEDICAL SOCIETY

An unusual opportunity is offered to the medical profession to listen to a discussion of *Diabetes* and *Insulin* by such authorities as Doctors Joslin, Newburgh and Fitz, at the Boston Medical Library on Wednesday evening, December 19, at 8.15. All are cordially invited, whether members of the Suffolk District or not.

BOSTON MEDICAL HISTORY CLUB

The Boston Medical History Club will meet at the Boston Medical Library, Monday, December 17, at 8.15 p. m.

"Gabriel Naudé, pre-eminent savant, bibliophile, philanthropist." Dr. Joseph W. Courtney.

"A letter from General LaFayette describing the fracture of his femur, treated by a new method of extension." Dr. Francis D. Donoghue.

Some early American medical account books. Mr. James F. Ballard.

Light refreshments after the meeting.

JOHN W. CUMMIN, M.D., *Secretary*.

NEW ENGLAND ROENTGEN RAY SOCIETY

The next meeting of the New England Roentgen Ray Society will be held in Ware Hall, Boston Medical Library, Friday evening, December 14, at 8 o'clock.

The subject will be "Demonstration of Cases, from the Registry of Bone Sarcoma," by Dr. E. A. Codman, Registrar. The discussion will be opened by Dr. Frederic J. Cotton. The subject is an interesting one and of extreme importance to roentgenologist and surgeon alike. There is a lot that we can all learn from Dr. Codman about the early diagnosis of bone tumors.

You are requested to bring films or lantern slides of bone tumors that have come under your observation; also films or slides of other unusual or interesting cases.

P. F. BUTLER, M.D., *President*.

A. S. MACMILLAN, M.D., *Secretary*.

DISEASES REPORTED TO MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH

WEEK ENDING NOVEMBER 24, 1923

<i>Disease</i>	<i>No. of Cases</i>	<i>Disease</i>	<i>No. of Cases</i>
Anterior poliomyelitis	11	Pellagra	1
Chicken-pox	373	Pneumonia, lobar	63
Diphtheria	360	Scarlet fever	284
Encephalitis lethargica	3	Septic sore throat	3
Epidemic cerebrospinal meningitis	2	Suppurative conjunctivitis	4
German measles	8	Syphilis	29
Gonorrhea	93	Trachoma	2
Influenza	3	Tuberculosis, pulmonary	117
Malaria	1	Tuberculosis, other forms	12
Measles	293	Typhoid fever	11
Mumps	184	Whooping cough	100
Ophthalmia neonatorum	15		

UNITED STATES CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces an open competitive examination for Social Worker (Medical).

The examination will be held throughout the country on January 9. It is to fill vacancies in the Veterans' Bureau, for duty at Chicago, Ill., at entrance salaries ranging from \$1,800 to \$2,100 a year, and vacancies in positions requiring similar qualifications.

The duties are to secure for the physician accurate personal and social data, make such adjustments as are necessary to enable the patient to continue treatment until maximum benefit is received; to assist in carrying out the physician's plan for after-care and follow-up of patient upon discharge from clinic or hospital in order to prevent unnecessary relapse.

The examination will consist of mental tests, questions in social service, including the writing of a report on a case, and a rating on education, training, and experience.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the Board of U. S. Civil-Service Examiners at the post office or custom house in any city.

SOCIETY MEETINGS

DISTRICT SOCIETIES

Bristol South District Medical Society:

The annual meeting will be held in New Bedford, May 1, 1924.

Essex North:—Semi-annual meeting at Haverhill, January 2, 1924. Annual meeting at Lawrence General Hospital, May 7, 1924.

Essex South District Medical Society:

January 7, 1924.—Essex Sanatorium, Middleton, 4 p. m. Tuberculosis conference in conjunction with Essex North.

January 23, 1924.—Lynn Hospital. Speaker, Dr. Frank H. Lahey of Boston.

March 19, 1924.—Salem Hospital.

May 7, 1924.—Annual meeting, Relay House, Nahant, in conjunction with Lynn Medical Fraternity.

Franklin District:—Society meets at Greenfield the second Tuesday of January, March, May, July, September. Annual meeting in May.

Hampden District:—The meetings for the year are as follows:

January, 1924, at Springfield. April, 1924, at Springfield; annual meeting.

Hampshire District Medical Society:

Meetings held bi-monthly, the second Wednesday in the month, at Boyden's Restaurant, Northampton.

Middlesex South District Medical Society:

December, 1923.—Hospital Day, probably at the Cambridge Hospital.

January 30, 1924.—Combined meeting with Suffolk District at the Boston Medical Library.

February 27, 1924.—Combined meeting with the Surgical Section of Suffolk District at the Boston Medical Library.

March, 1924.—Hospital meeting; place not yet determined.

April, 1924.—Annual meeting.

Norfolk South District:—Meetings first Thursday of each month at 11.30 a. m., January, February, March, April and May, at United States Hotel, Boston. The February and May meetings are stated meetings.

Suffolk District Medical Society:

December 19, 1923.—Meeting of Medical Section at the Boston Medical Library at 8.15 p. m.

January 30, 1924.—In association with the Boston Medical Library and the Middlesex South District Medical Society at the Boston Medical Library at 8.15 p. m.

February 27, 1924.—Meeting of Surgical Section, in association with the Middlesex South District at the Boston Medical Library at 8.15 p. m.

March 26, 1924.—Meeting of the Medical Section, in association with the Boston Association for the Prevention and Relief of Heart Disease, at the Boston Medical Library at 8.15 p. m.

April 30, 1924.—Annual meeting, to be held at the Boston Medical Library at 8.15 p. m.

Worcester District:—The meetings for the year are as follows:

January 9 at St. Vincent Hospital, Worcester.

February 13 at Memorial Hospital, Worcester.

March 13 at City Hospital, Worcester.

April 10—A public meeting.

May 8—Annual meeting.

STATE, INTERSTATE AND NATIONAL SOCIETIES

Schedule of meetings of the New England Dermatological Society:

Wednesday, February 13, 1924, at 2 p. m., in the Skin Out-Patient Department, Massachusetts General Hospital.

Wednesday, April 9, 1924, at 3 p. m., in the Surgical Amphitheatre, Boston City Hospital.